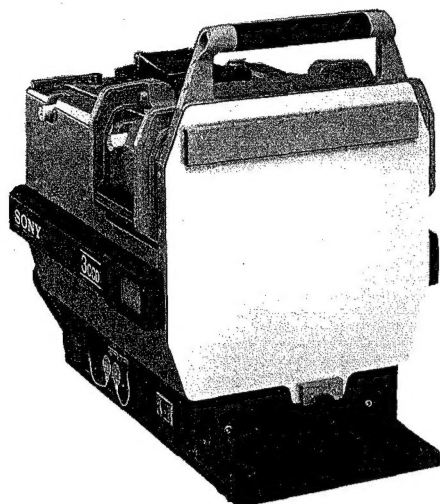


SONY®

COLOR VIDEO CAMERA

BVP-370P



OPERATION AND MAINTENANCE MANUAL

1st Edition (Revised 11)

Serial No. 40001 and Higher

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Section 1. OPERATION

1-1. Overview

The BVP-370P is a highest performance three-chip CCD color video camera designed for wide use in both studio and outside broadcast applications. It features above all, newly developed 2/3-inch FIT (Frame Interline Transfer) type CCD imagers using HAD (Hole-Accumulated Diode) light sensing elements, and a high resolution as represented by a total of 440,000 picture elements.

The compact and lightweight video camera with low power consumption embodies latest digital, analog and human engineering technologies. It boasts various innovative functions including precise auto setup by state-of-the art microcomputers, as well as ease of operation and handling.

Basically, the BVP-370P is to be connected to the CCU-370P camera control unit using a triaxial cable, and controlled via the CCU-370P, from the MSU-350 master setup unit or a remote control panel of the RCP-3700 series.* In addition to these units, the VCS-350 video selector and a variety of optional accessories are available to configure an optimal camera system for individual applications ranging from program production in studio to OB activities. Sufficient flexibility for as-desired system enhancement in future is another consideration taken in the design of this camera.

* To operate this camera not connected to the CCU-370P camera control unit (stand-alone operation), it is necessary to equip the camera with the BKP-370P stand-alone kit and RM-3601 remote control box (both optional).

1-1-1. Features

High picture performance

Thanks to the employment of newly developed FIT type HAD CCD image sensors, the vertical smear level of the BVP-370P is extremely low and its flare level much lowered as compared with cameras using conventional types of CCD. Also, two-line image enhancement and many other capabilities matching CCD camera's performance are used for this unit.

High signal-to-noise ratio

A high S/N of 60 dB (typical) has been achieved as a combined result of the employment of top performance CCD and full-scale application of excellent video circuitry and electronic packaging technologies.

Wide dynamic range

The automatic/manual control capabilities for knee point and knee slope enable a natural and sharp image to be obtained at up to 600% of normal light input level.

High sensitivity

A sensitivity of F8 at 2000 lux (typical) has been achieved. When video gain is raised to +18 dB, a satisfactory output level can be obtained at a minimum subject illuminance of 7.5 lux.

Automatic setup and data filing capabilities

Built-in microcomputers ensure precise and rapid automatic setup adjustments. A filing system is provided to enable adjustment data to be stored in the camera head and recalled at any time to adjust the camera automatically. These capabilities enable the camera to be set up within a short time, and the time required for camera maintenance to be reduced.

Electronic shutter

The operating speed of the BVP-370P's electronic shutter can be changed through six stages. Even a rapidly moving object can be shot to give a clear image by selecting an optimal shutter speed.

Extended Clear Scan^{TM 1)} (ECS) mode (for serial No.42701 and higher)

You can select an appropriate shutter speed with the built-in electronic shutter as explained above.

Furthermore, in the Extended Clear Scan (ECS) mode, you can select the shutter speed precisely with about 600 steps in the range of 1/25 to 1/9000 sec.

The ECS mode is suitable for shooting monitor screens or movies. You can obtain clear pictures in which horizontal streaks can hardly be seen.

Flexible audio facility

The BVP-370P is provided with two microphone channels, an intercom channel for producer line, an intercom channel for engineer line, and one program audio channel. Selection between the two intercom channels can be performed with the switch on the rear panel.

1) Clear Scan is a trademark of Sony corporation.

Self-diagnosis

Should a problem occur in the BVP-370P, its self-diagnostic capability can be used to detect and locate the problem, thus facilitating troubleshooting actions.

In-screen display capability

Camera status and warning messages can be displayed in the viewfinder screen using characters generated by a built-in character generator. Various shooting guide markers (box cursor, center marker, safety zone marker, and zoom position marker) can also be displayed in the screen.

Combinable with high performance 7-inch viewfinder

The BVP-370P can be used in combination with either the BVF-70ACE 7-inch monochrome, or BVF-7000AQM 7-inch color, viewfinder (not supplied). When mounted on the camera head, the high performance viewfinder can easily be turned through 40° both upward and downward, and through 90° both to the right and left. It is also possible to fix the viewfinder at the desired position.

Mounting and demounting the viewfinder can easily be performed without necessity of any special tool.

Reliable transmission of various signals via a single triaxial cable

The BVP-370P transmits wide-band component video signals (Y, R-Y, B-Y) to the CCU-370P via a triaxial cable. Audio, return video and control signals can also be transmitted between the two units via this cable. In addition, power can be supplied to the camera head via the same cable.

Compact, lightweight, and power-saving design

The BVP-370P meets the basic requirements that video cameras for outside broadcast are required to satisfy: small size, light weight, and low power consumption.

Heat dissipating construction

Ventilation and other heat dissipating measures have been designed into the mechanical construction of the BVP-370P.

Others

As a CCD camera, the BVP-370P has the following advantages over cameras with a tube-type pickup device:

- Almost no problems of lag (after-image), image burn, geometric distortion of image
- High resistance to vibration or mechanical shock
- Capability of operating stably even in strong magnetic fields
- No necessity for registration adjustment

1-1-2. File System

The BVP-370P can memorize adjustment data in the form of three types of files described below.

1. Reference file

This is a file to store the reference values for auto setup adjustments.

2. Setup files

These are files to store the setup data automatically or manually adjusted to different shooting conditions before actual shooting. The setup data stored in any of these files can be recalled at any time to automatically set up the camera system for a similar shooting condition to that for which the file was created and stored.

3. Scene files

Painting data prepared for a particular scene can be stored in a scene file. For example, the data adjusted to a particular scene during rehearsal can be stored in a scene file, which can be recalled to automatically adjust the camera system within a short time. Then you can immediately start shooting that particular scene.

About file operation

Creation, storing and recalling of files can be performed using the MSU-350 master setup unit (optional) or the RCP-3720/3721/3730/3731 series remote control panel (optional). The types and numbers of files which can be handled differ with the unit or panel used. For details, see the operation and maintenance manual for the master setup unit or remote control panel.

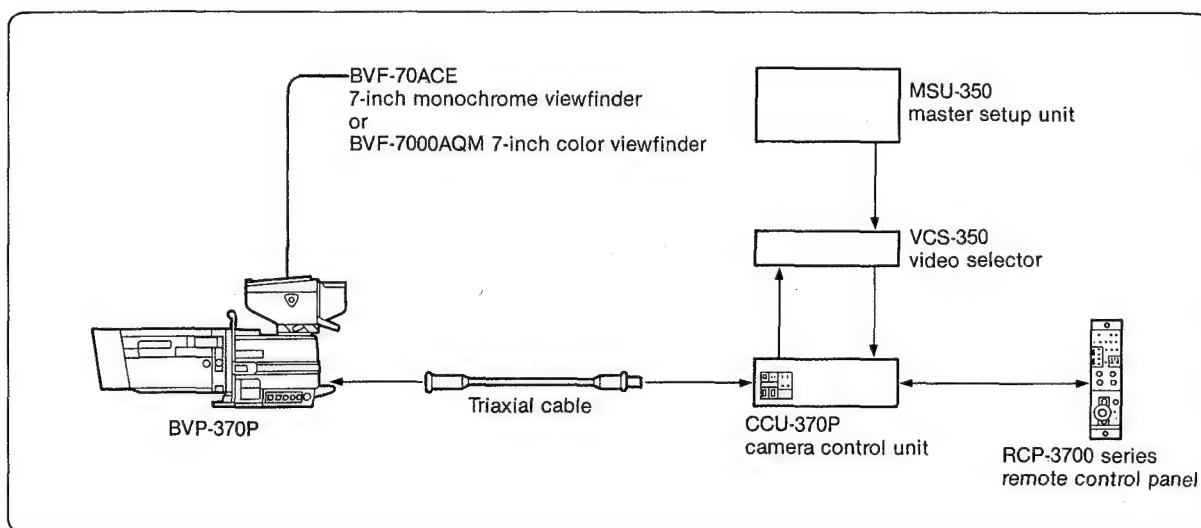
1-2. Camera System Configurations

1-2-1. Basic Configuration

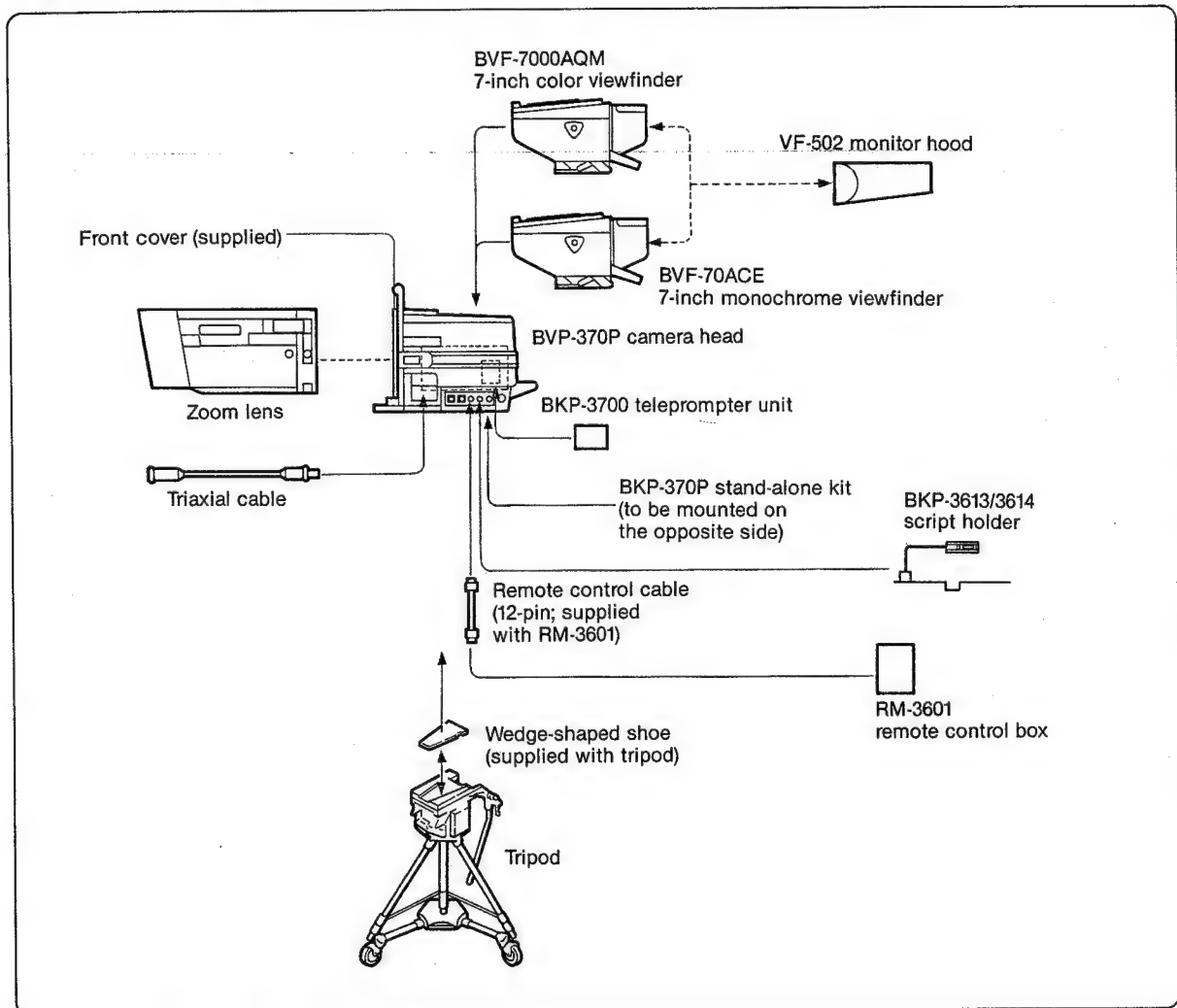
Interconnection of the BVP-370P and the CCU-370P camera control unit is to be made using a triaxial cable. The maximum allowable cable length depends on the cable as follows:

Name of cable	Diameter	Max. allowable length
Fujikura 9.6/2.22 EFTXF	14.5 mm	3000 m (2400 m*)
Belden 9232	13.2 mm	2250 m (1800 m*)
Fujikura 4.8/1.0 EFTXF	8.5 mm	1500 m (1200 m*)

* For return video.

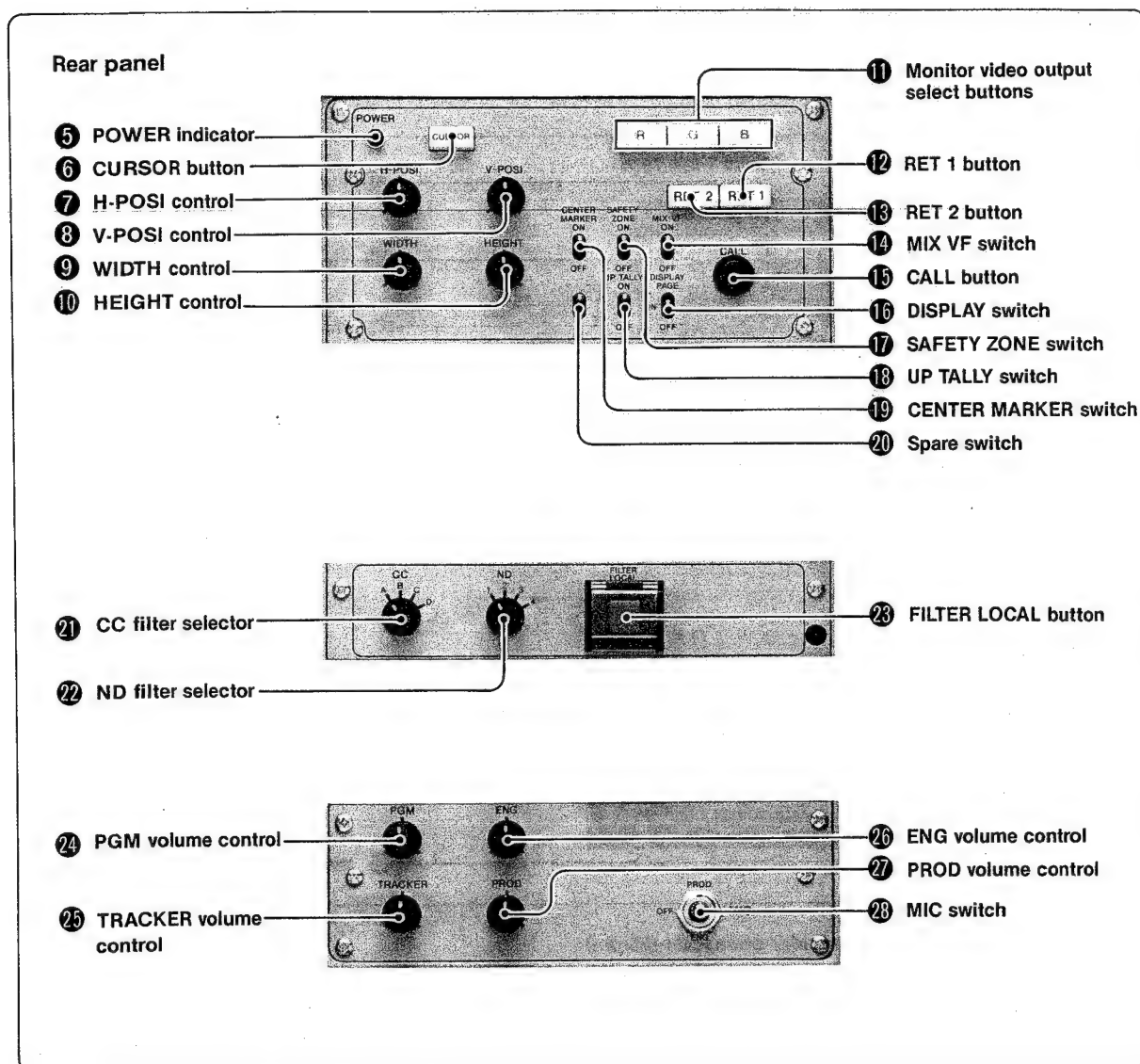


1-2-2. Configuration with Optional Accessories



Remarks:

- The BVF-70ACE and BVF-7000AQM are supplied with a standard hood.
- The VF-502 is for use with BVF-70ACE/7000AQM viewfinder in outdoor shooting.
- The BKF-3700 is required on both the camera head and the CCU when a teleprompter system is to be used with the camera system.
- The BKF-3613 is for loose-type scripts, and the BKF-3614 for bound scripts. Both are supplied with a script light.
- The BKF-370P is equipped with AC power input and output connectors, a VTR. connector, and an encoder circuit board required for stand-alone use of the camera.



- 5 POWER indicator**
This indicator lights when the camera is turned on.
- 6 CURSOR button**
When this button is depressed, the box cursor appears in the viewfinder screen. When pressed again, the cursor disappears. For more details, see "1-6. Viewfinder Screen Indications."
- 7 H-POSI (horizontal position) control**
Used to adjust the horizontal position of the box cursor in the viewfinder screen.

8 V-POS1 (vertical position) control

Used to adjust the vertical position of the box cursor in the viewfinder screen.

9 WIDTH control

Used to adjust the width of the box cursor in the viewfinder screen within the safety zone (see the description of ⑦).

10 HEIGHT control

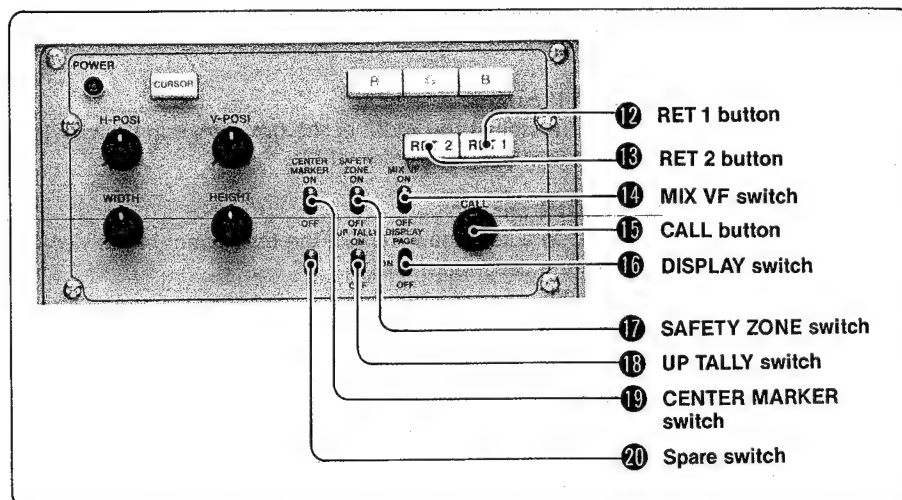
Used to adjust the height of the box cursor in the viewfinder within the safety zone (see the description of ⑦).

11 Monitor video output select buttons

Used to select video signals to be output to the viewfinder. When the EXT VF OUT/RET OUT switch on the MS board inside the camera is set to EXT VF OUT, these buttons can be used to select video signals to be output to the external monitor connected to the OUTPUT MONITOR ④.

These buttons work whether depressed individually or in varied combinations.

- When the R, G, and B buttons are all depressed, the Y (luminance) signal is output to the viewfinder (and to the external monitor if the above switch is set to EXT VF OUT).
- When none of the buttons are depressed, the Y signal is output to the monochrome viewfinder (or to the monochrome monitor if the above switch is set to EXT VF OUT), or the G signal is output to the color viewfinder.



12 RET 1 (return video 1) button

When this button is depressed, the return video 1 signal can be monitored on the viewfinder screen. When the EXT VF OUT/RET OUT switch is set to EXT VF OUT, the output signal to the MONITOR OUT connector ③⑤ is switched to the return video 1 signal.

When the button is pressed again, the camera signal is again output to the viewfinder (or to the external monitor if the above switch is set to EXT VF OUT).

When the EXT VF OUT/RET OUT switch is set to RET OUT, the return video 1 signal is always output to the MONITOR OUT connector regardless of the states of the monitor video output select buttons and this RET 1 button. (It is only when the RET 2 button ⑬ is depressed that the return video 2 signal is output.)

13 RET 2 (return video 2) button

If this button is depressed when another return video system (the return video 2) is in operation besides the return video 1 system, the return video 2 signal can be monitored on the viewfinder screen. When the EXT VF OUT/RET OUT switch is set to EXT VF OUT, the output signal to the MONITOR OUT connector ③⑤ is switched to the return video 2 signal.

When the button is pressed again, the camera signal is again output to the viewfinder (or to the external monitor if the above switch is set to EXT VF OUT).

- If both RET 1 and RET 2 buttons are depressed, the return video 1 signal is output (regardless of the setting of the EXT VF OUT/RET OUT switch.)

14 MIX VF (mixed return video) switch

When the RET 1 button ⑫ or RET 2 button ⑬ is depressed with this MIX VF button being set to ON, the camera output signal mixed with the return video 1 or 2 signal can be monitored on the viewfinder screen.

The mixing ratio of the two signals can be set using the potentiometer inside the CCU-370P. (For details, see Section 2 and after of the operation and maintenance manual for the CCU-370P.)

When the RET 1 or RET 2 button is depressed with this MIX VF switch being set to OFF, the return video 1 or 2 alone can be monitored on the viewfinder screen.

15 CALL button

Press this button when you want to call the operator of the CCU, RCP (remote control panel), or MSU (master setup unit). When it is pressed, the red tally lamps on the CCU, RCP and MSU light up.

16 DISPLAY switch

Use this switch when you want to see, in the viewfinder screen, status indications about settings of switches/selectors, or items and results of automatic adjustments.

PAGE: Every time the switch is pushed up to this position, the current status indication page is replaced with next page.

ON: The position to enable the status indication display function.

OFF: The position to disable the status indication display function.

17 SAFETY ZONE switch

When this switch is set to ON, a frame showing 90% of the picture being shot (the safety zone mark) is displayed in the viewfinder screen. When the switch is set to OFF, the frame disappears. For more details, see "1-6. Viewfinder Screen Indications." The safety zone area percentage can be increased to 80% using an internal switch. (For details, see Section 2 and after.)

18 UP TALLY switch

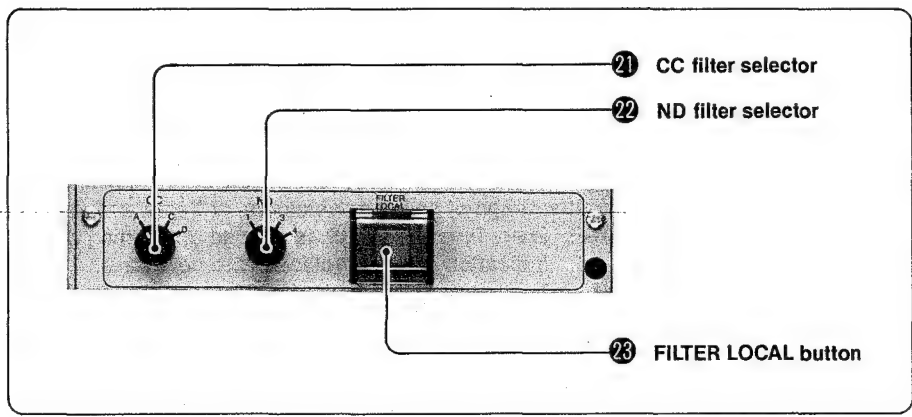
The tally lamps except for the red tally lamp on the viewfinder (i.e., the external, side, and front tally lamps) can be made operative or inoperative using this switch.

19 CENTER MARKER switch

When this switch is set to ON, a white cross is displayed at the center of the viewfinder screen. When the switch is set to OFF, the white cross disappears. For more details, see "1-6. Viewfinder Screen Indications."

20 Spare switch

Not used.



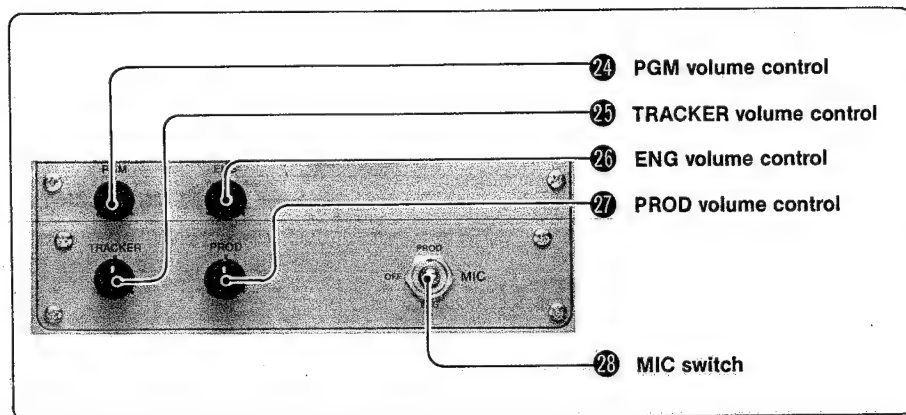
21 CC (color temperature conversion) filter selector
When the FILTER LOCAL button 23 is lit, this selector can be used to select an appropriate filter for the lighting condition.

Selector position	Selection of filter (color temperature)
A	Cross filter
B	3200 K
C	4300 K
D	6300 K

22 ND filter selector
When the FILTER LOCAL button 23 is lit, this selector can be used to select an appropriate ND filter.

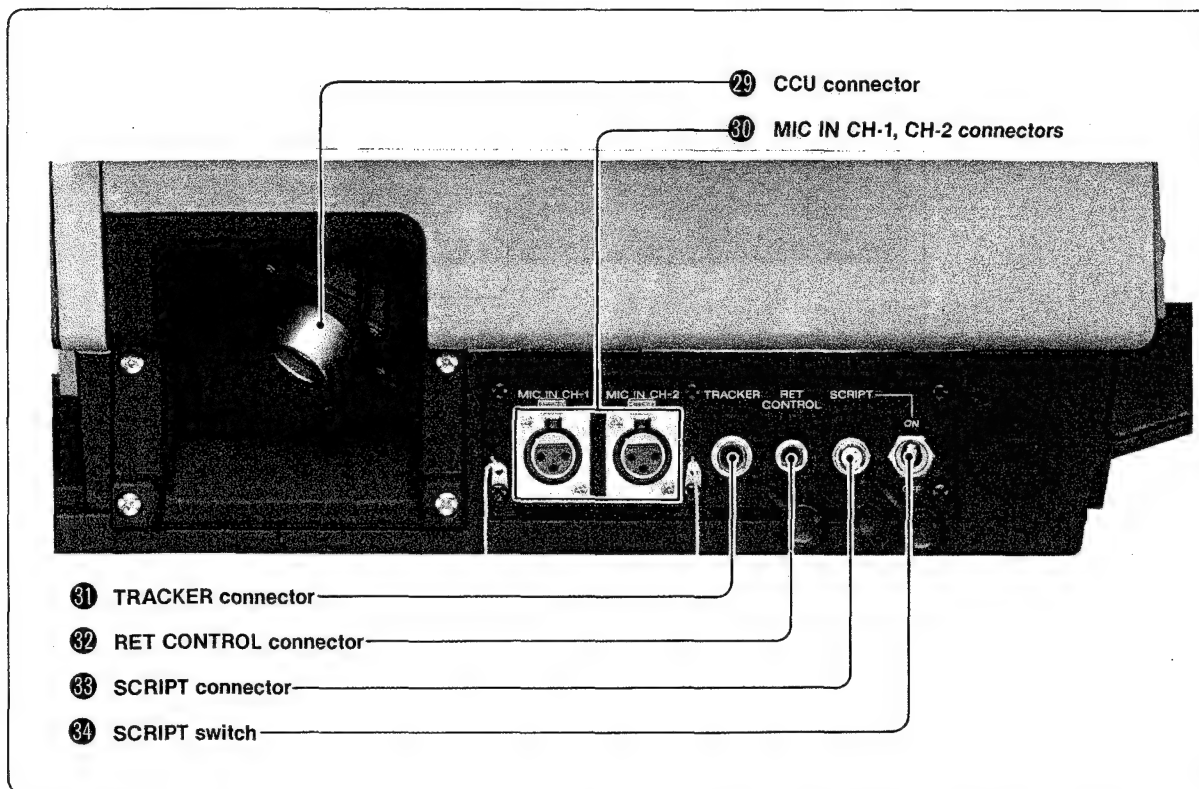
Selector position	Selection of filter
1	Clear
2	1/4 ND
3	1/8 ND
4	1/16 ND

23 FILTER LOCAL button
When the cover is opened and this button is depressed to light up, it is become possible to select an appropriate CC filter or ND filter using the CC 21 or ND 22 filter selector. When the button is pressed again to go out, filter control function is passed to the MSU/CCU.



- 24 PGM (program audio) volume control**
Used to adjust the program audio output level.
- 25 TRACKER volume control**
Used to adjust the output level of the audio from the TRACKER connector **31**.
- 26 ENG (engineer line) volume control**
Used to adjust the output level of the engineer line intercom.
- 27 PROD (producer line) volume control**
Used to adjust the output level of the producer line intercom.
- 28 MIC (intercom microphone) switch**
PROD: The headset microphone is connected to the producer line.
ENG: The headset microphone is connected to the engineer line.
OFF: The headset microphone is disconnected from the intercom system.

1-3-2. Side Connector Panels



29 CCU (camera control unit) connector

Connect to the CAMERA connector of the CCU-370P using a triaxial cable. All signals of the BVP-370P system such as video, audio, and control signals can be carried along the single cable between the camera and the CCU. Also, power is supplied to the camera via the same cable.

30 MIC IN CH-1, CH-2 (microphone input channel 1, channel 2) connectors

The outputs of two microphone channels can be connected to these connectors.

31 TRACKER connector (10-pin)

The cameraman can intercommunicate with the tracker via this connector. Also, the red tally signal, producer/engineer line intercom signal, and program audio can be output from this connector.

32 RET CONTROL (return video control) connector (6-pin)

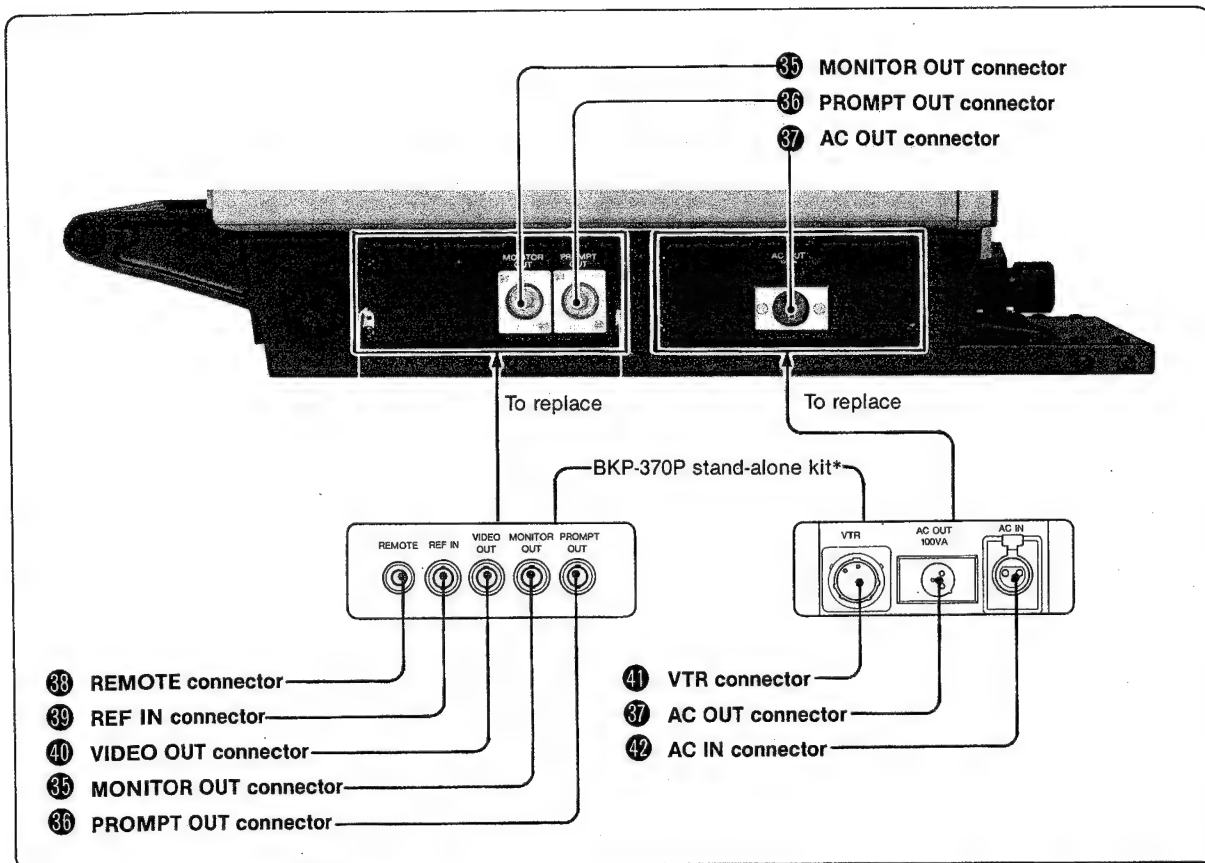
Connect an external unit for remotely switching the return videos 1 and 2, or remotely turning on/off the intercom microphone.

33 SCRIPT (script light) connector (4-pin)

Power for script light (max. 5 W) can be supplied via this connector.

34 SCRIPT (script light) switch

Used to turn on/off the power for the script light connected to the SCRIPT connector 33.



35 MONITOR OUT (output) connector (BNC type)

When the EXT VF OUT/RET OUT switch on the MS board inside the camera is set to EXT VF OUT, a signal selected with the monitor video output select buttons 11 on the rear panel is output from this connector.

When the above switch is set to RET OUT, a return video signal is output from the connector. (Normally the return video 1 signal is output. But when the RET 2 button 13 on the rear panel is depressed, the return video 2 signal is output from this connector.)

36 PROMPT OUT (prompter output) connector (BNC type)

When the camera and the CCU are equipped with the BKP-3700 teleprompter unit, the signal for prompter monitor is output from this connector.

37 AC OUT (ac power output) connector (3-pin)

AC power (220 V) for external equipment is available via this connector. 100 V, 120 V, or 240 V ac is also available if the socket inside the camera is replaced with an appropriate one. For details, see Section 2 and after.

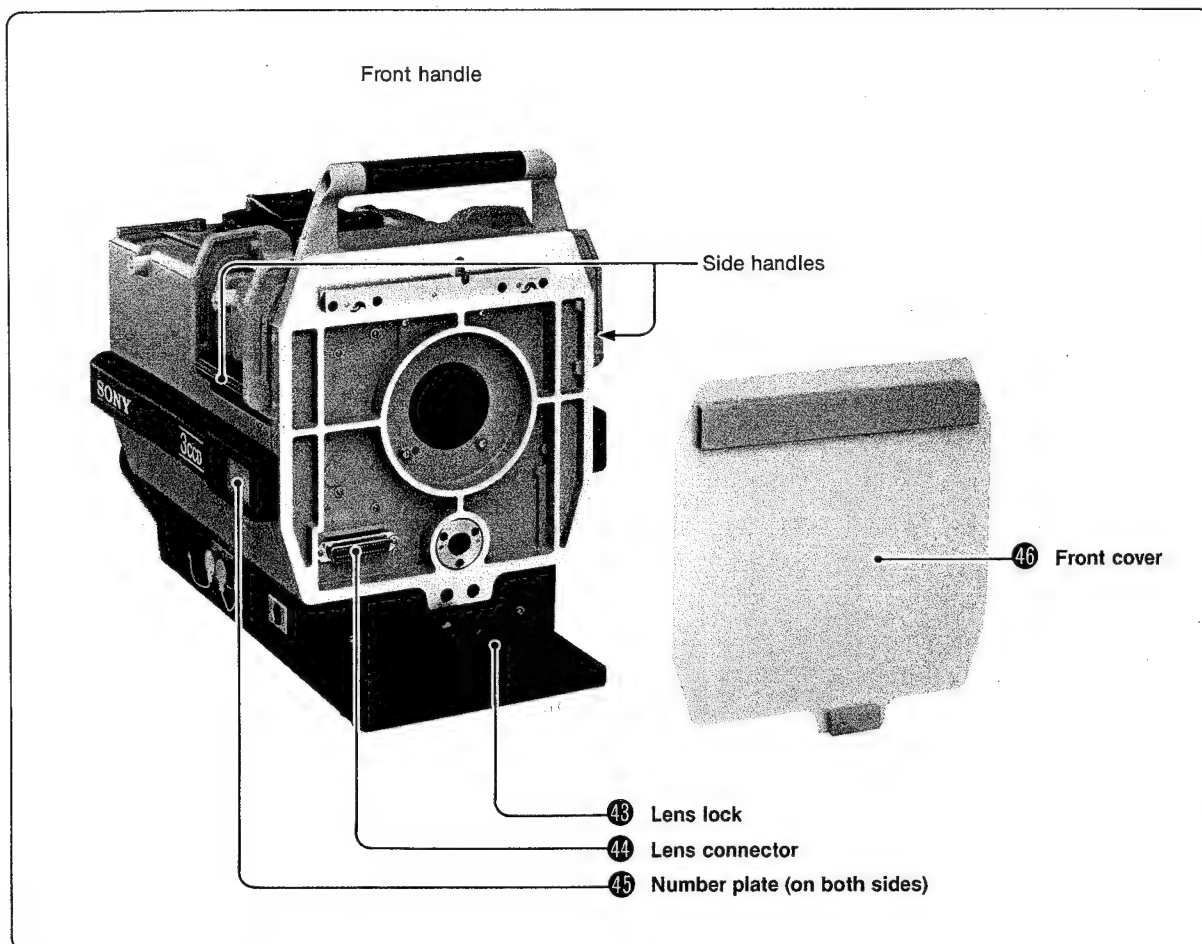
38 REMOTE (remote control box) connector

Connect the RM-3601 remote control box for control of the camera in stand-alone use.

* Replacing the left side connector panels with the BKP-370P stand-alone kit (optional) enables the BVP-370P to be used without connecting to the CCU. (For details on stand-alone operation, see page 1-41(E) as well as Section 2 and after.)

- ③⑨ **REF IN (reference signal input) connector (BNC type)**
To lock the stand-alone operation of the camera to an external reference sync signal (VBS or BB), input the signal to this connector.
- ④⑩ **VIDEO OUT connector (BNC type)**
In stand-alone operation of the camera, an encoded video signal is output from this connector.
- ④⑪ **VTR connector (26-pin)**
Connect a VTR using the CCZ-Q cable.
- ④⑫ **AC IN (ac power input) connector**
For stand-alone use of the camera, connect to an ac outlet (220 to 240 V).

1-3-3. Front



43 Lens lock

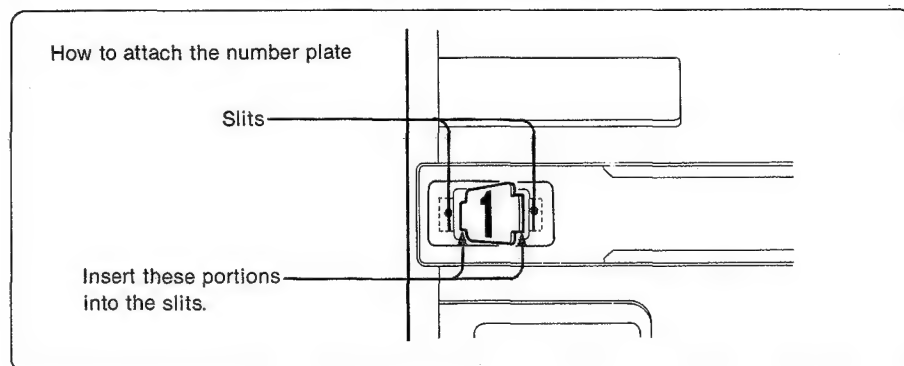
Used to lock the lens unit after hooked on the projection on the upper front of the camera.

44 Lens connector (36-pin)

This connector is the interface with the lens unit for lens control signals. Power can be supplied to the lens unit via this connector. (For models of lens units usable with the BVP-370P, consult your Sony representative or lens manufacturers.)

45 Number plate (supplied)

Attach an appropriate one of the number plates supplied.

**46 Front cover (supplied)**

The camera was shipped attached with this cover. On how to remove this cover, see "1-4-2. Attaching the Lens Unit."

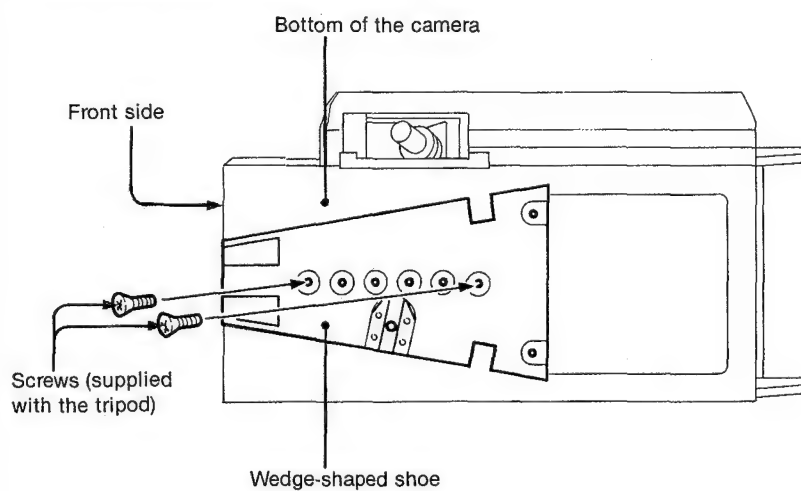
1-4. System Setup

1-4-1. Mounting the Camera on the Tripod

Proceed as follows:

- 1** Lay the camera on its lateral side on a table, desk, or the like.
- 2** Attach the wedge-shaped shoe (supplied with the tripod) to the bottom of the camera.

Example: When using a VINTEN's tripod.



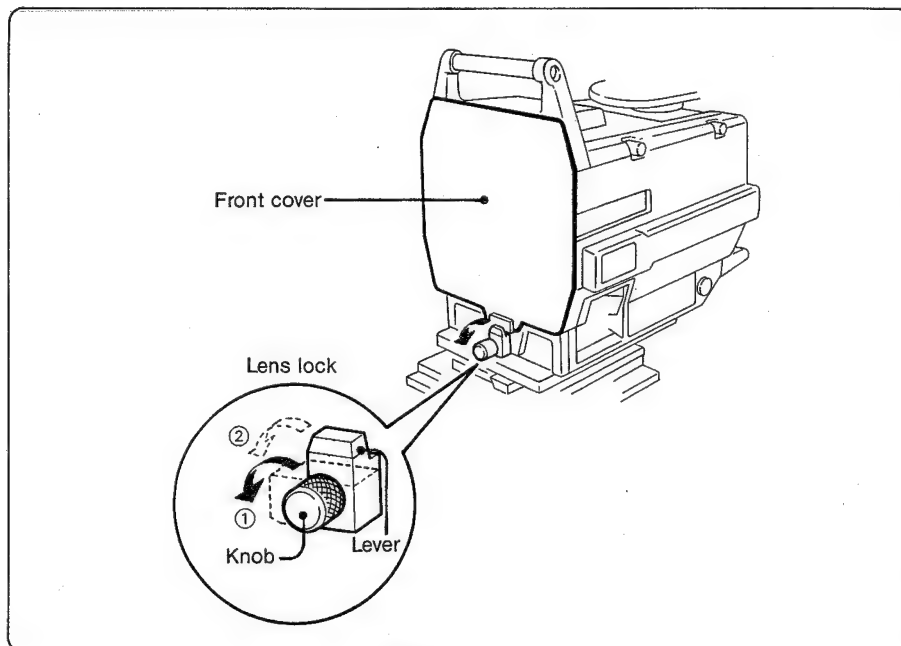
- Determine the shoe attaching position taking the weight balance of the camera and the lens unit into account.

- 3** Attach the camera to the camera mount of the tripod.

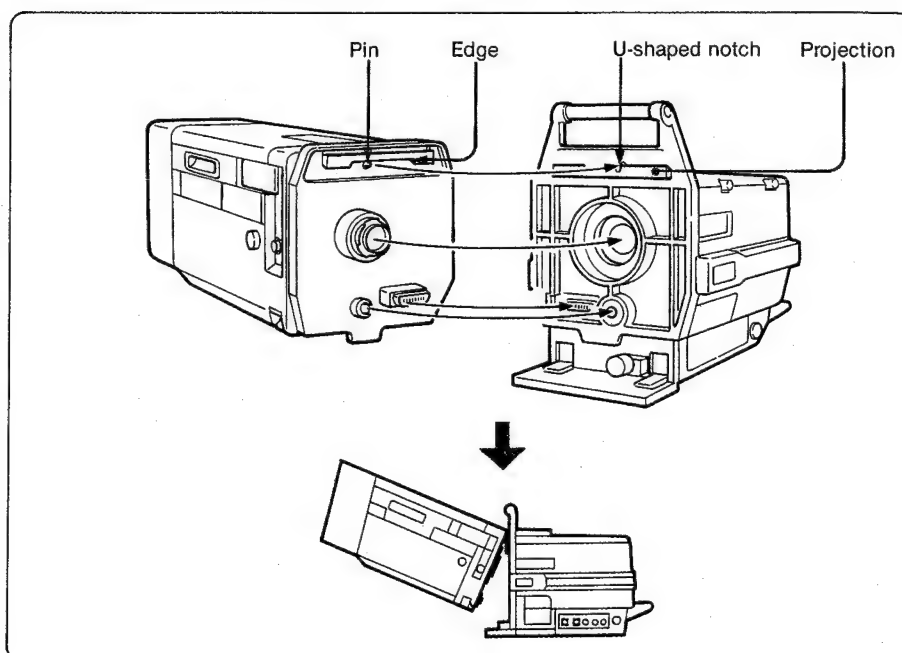
1-4-2. Attaching the Lens Unit

Proceed as follows:

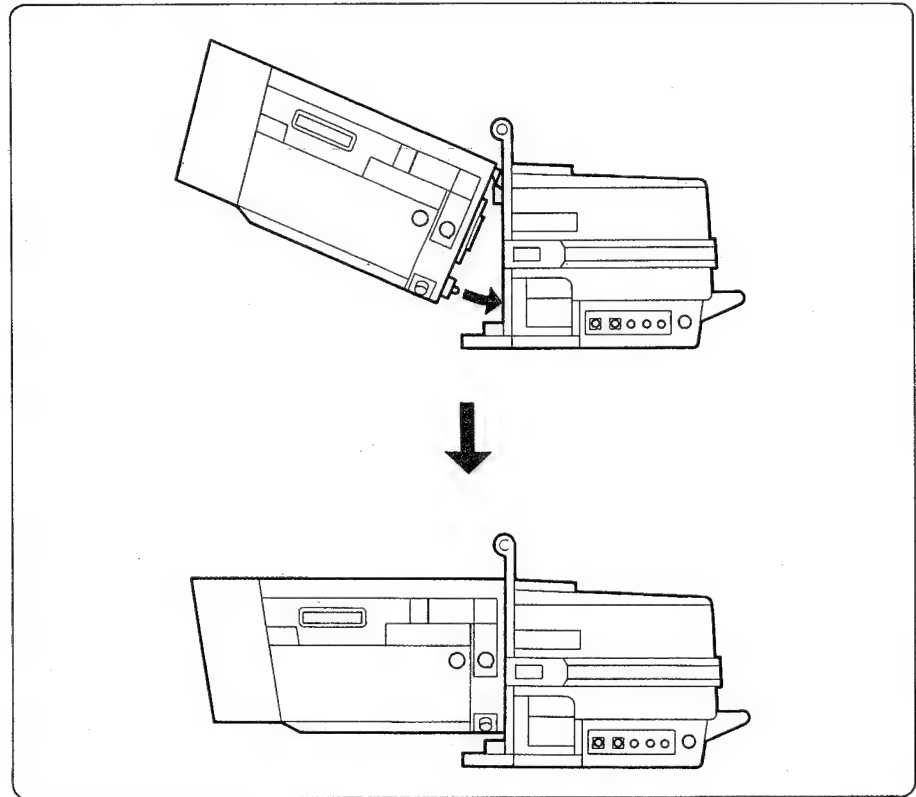
- 1 Loosen the knob of the lens lock at the lower front of the camera (①), and turn the lever as illustrated (②), then remove the front cover.



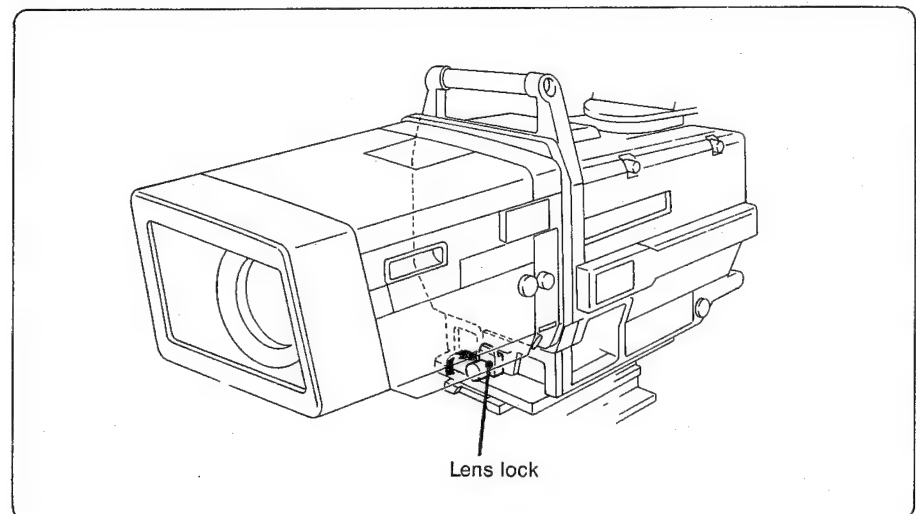
- 2 Aligning the pin on the lens unit with the U-shaped notch in the projection on the upper front of the camera, hook the edge of the lens unit on the projection of the camera.



- 3** Couple the lens unit to the camera.

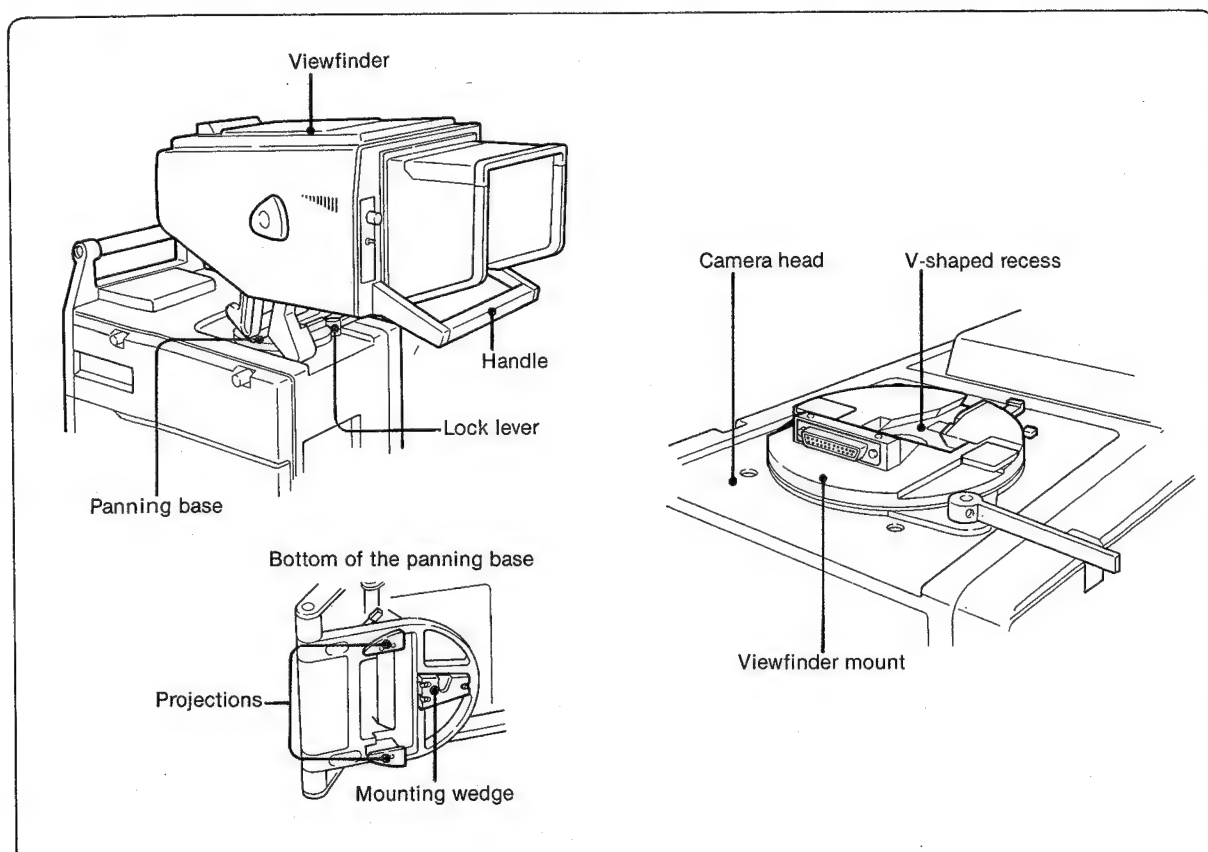


- 4** Turn the lever of the lens lock as illustrated, then turn the knob clockwise.



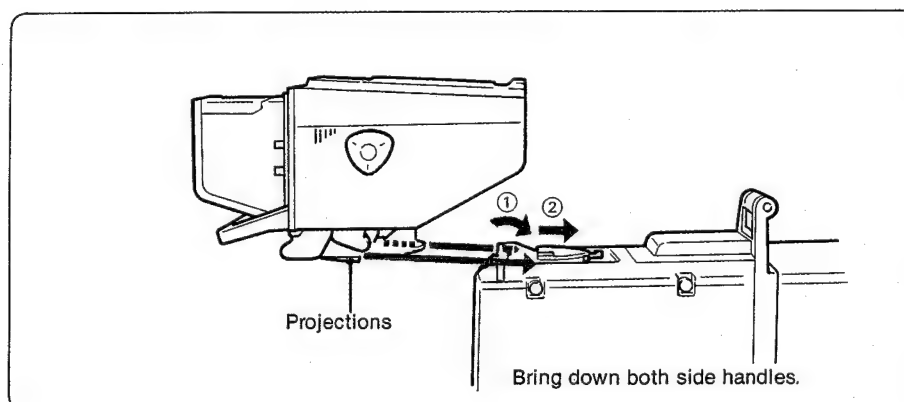
1-4-3. Attaching the Viewfinder

Parts used for attaching the viewfinder to the camera

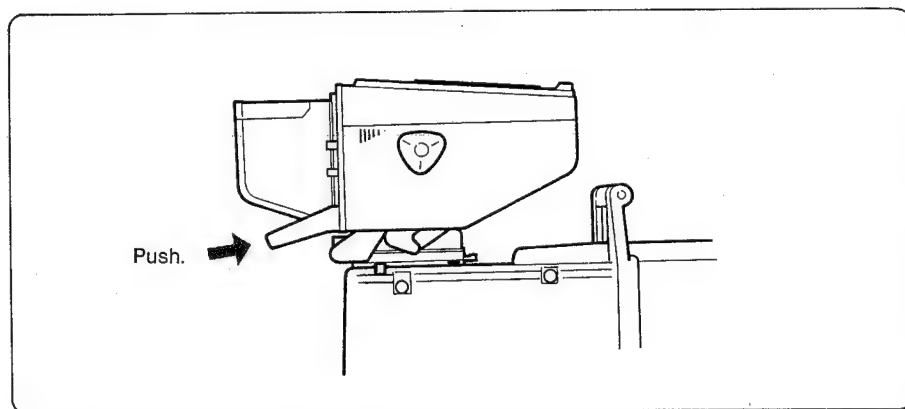


How to attach

- 1 Put the viewfinder on the viewfinder mount of the camera in such position that when you move it forward, the mounting wedge on the bottom of the viewfinder's panning base will enter the V-shaped recess in the viewfinder mount and the projections on the panning base bottom will come into the positions as illustrated.

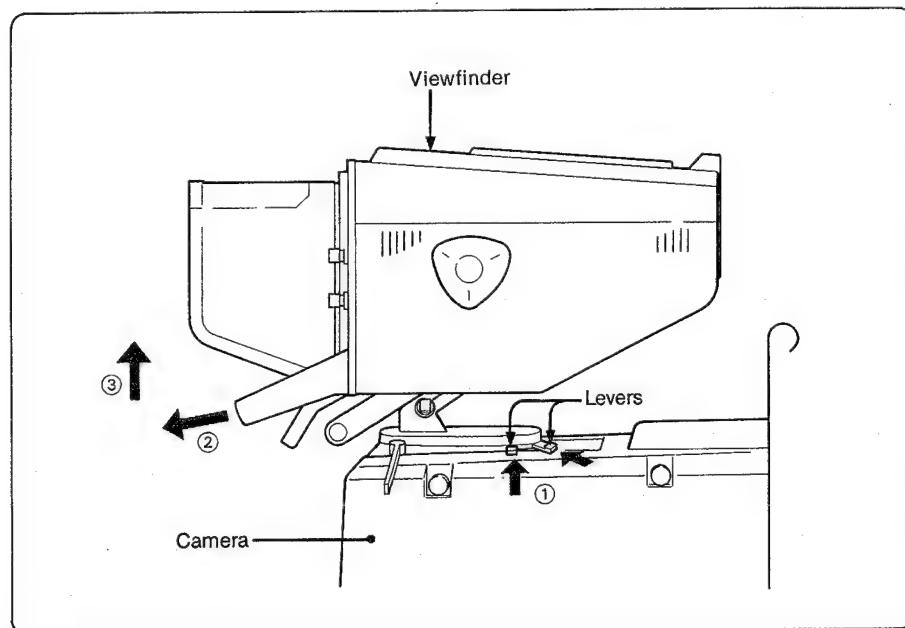


- 2** Push the viewfinder forward by the handle so that the panning base is securely held by the viewfinder mount of the camera.



How to detach

Push the two levers simultaneously as shown by the arrows (①), then pull the handle toward you (②), and then lift up the viewfinder.

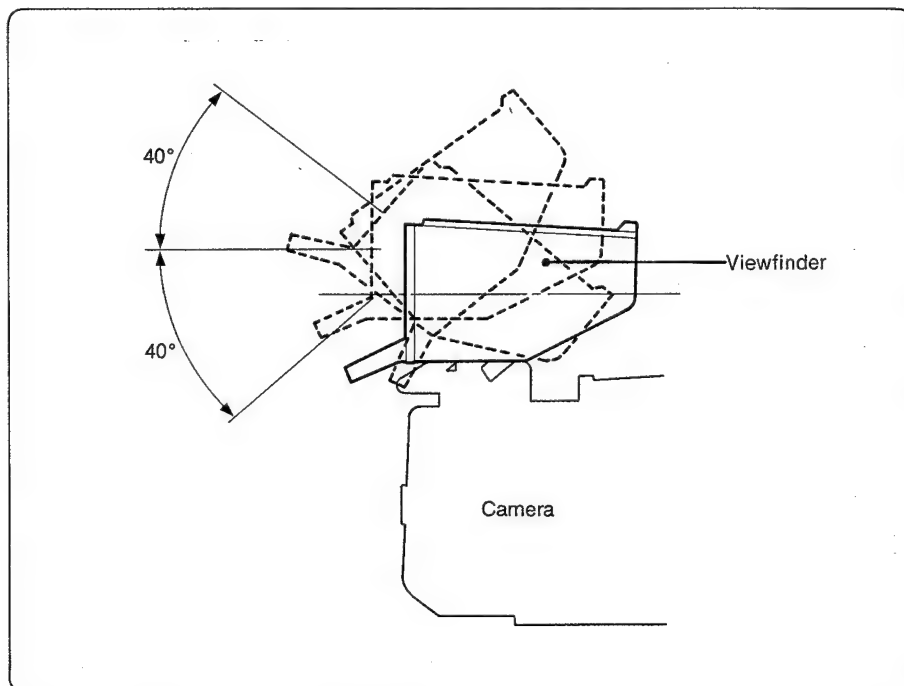


1-5. Adjusting the Angle of the Viewfinder

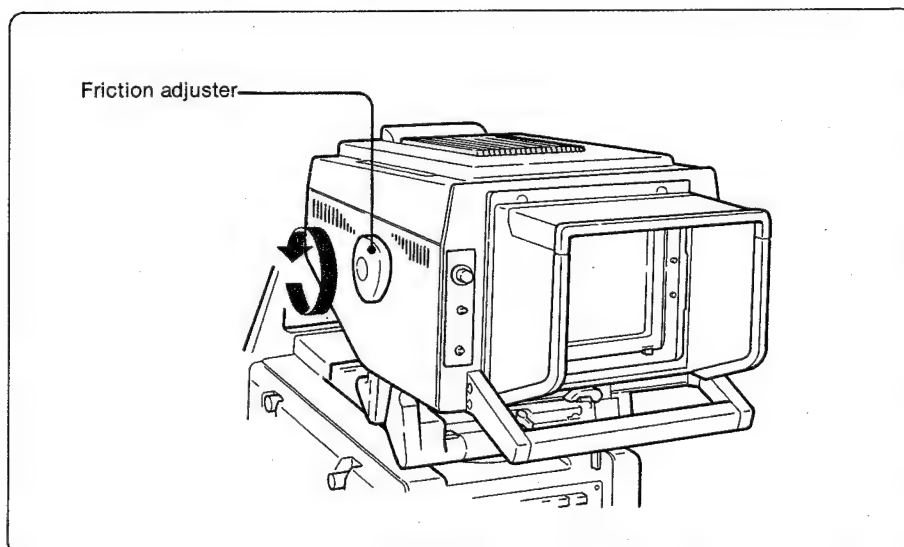
You can adjust the angle of the viewfinder so that you can see its screen comfortably.

Tilting the viewfinder

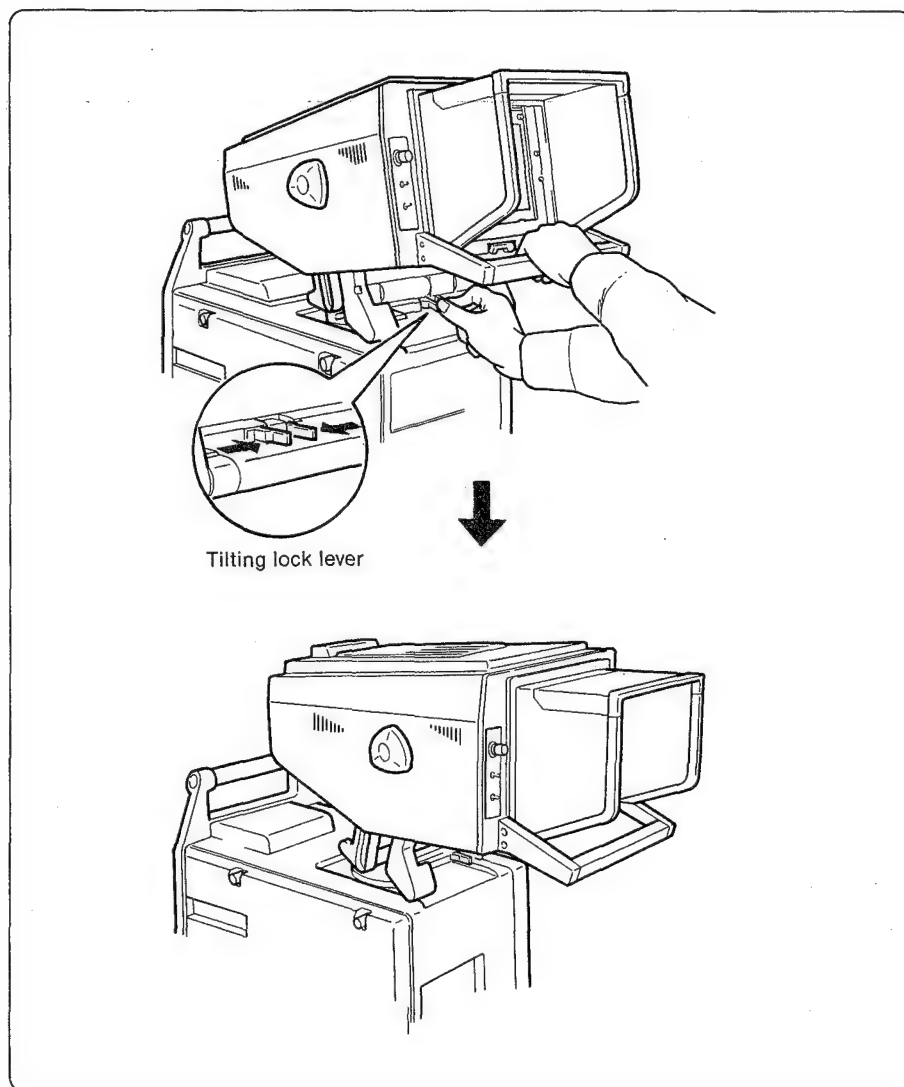
The viewfinder can be turned through 40° both upward and downward.



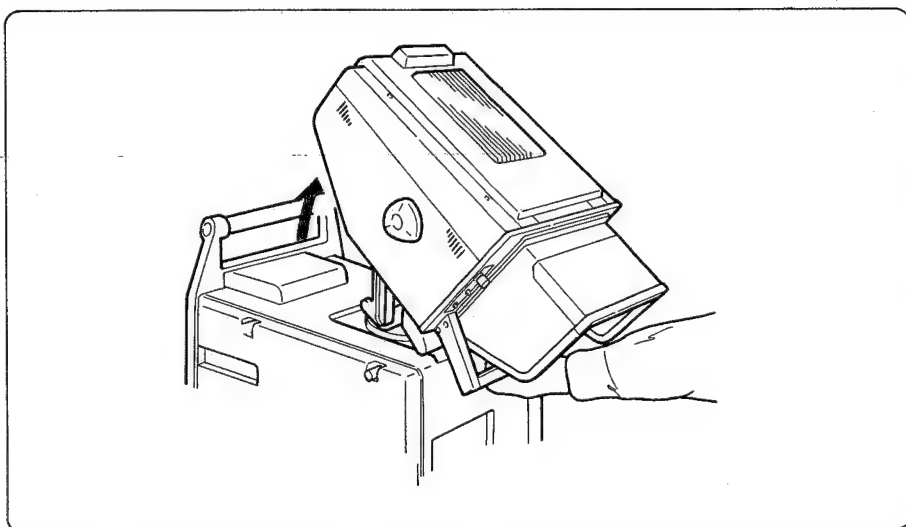
- 1 Loosen the friction adjusters on both sides of the viewfinder a little.



- 2** While pressing the prongs of the tilting lock lever of the viewfinder one against the other, pull up the viewfinder to the top position. The viewfinder locks in that position when you release the tilting lock lever.



3 Adjust the viewfinder to a comfortable angle for you.



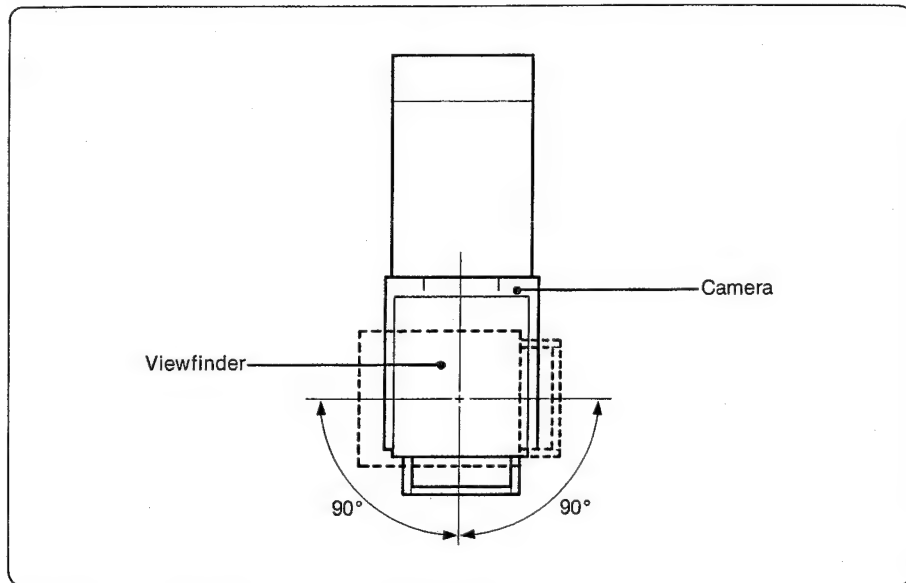
4 Tighten the friction adjusters.

Note

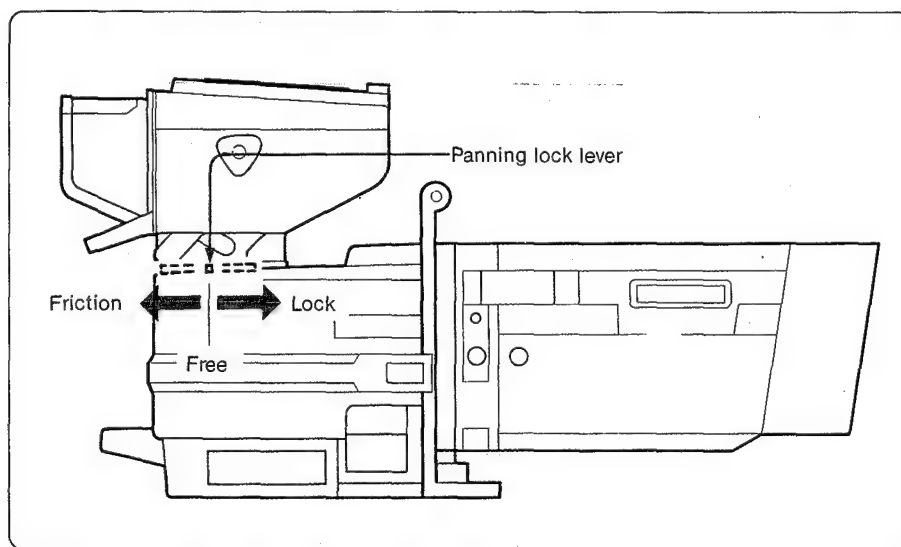
When moving the camera from a place to another, tighten the friction adjusters after lowering the viewfinder to its standard position while pressing the prongs of the tilting lock lever one against the other.

Panning the viewfinder

The viewfinder can be turned through 90° both to the right and left.



When the panning lock lever is positioned toward the rear side of the camera, the viewfinder's panning base can be turned in the friction mode. The center position of the lever frees the panning base. When positioned toward the front side of the camera, the lever locks the panning base.

**Friction**

When the panning lock lever is set to this position, the viewfinder neither turns to the right nor to the left easily, even when you move the camera while shooting. However, you can turn the viewfinder through up to 90° both to the right and left by using a little more force than when the panning lock lever is set to the free position.

Free

You can turn the viewfinder through up to 90° both to the right and left very easily.

Lock

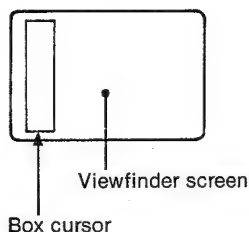
The viewfinder is fixed in the position where it is, although it may still move slightly.

1-6. Viewfinder Screen Indications

1-6-1. Marker Indications

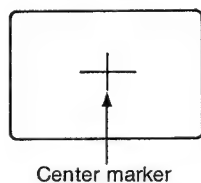
You can get a box cursor, a center, a safety zone, and a zoom position marker in the viewfinder screen by using the appropriate switches.

Box cursor



The box cursor appears in the viewfinder screen when the CURSOR button is depressed. When the button is pressed again, the cursor disappears.

Center marker



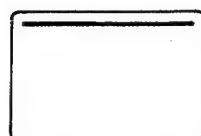
A white cross indicating the center of the screen appears when the CENTER MARKER switch is set to ON. It disappears when the switch is set to OFF. For more details, see Section 2 and after.

Safety zone marker



A frame showing 90% of the picture being shot (safety zone marker) is displayed when the SAFETY ZONE switch is set ON. It disappears when the switch is set to OFF. The safety zone area percentage can be increased to 80% using an internal switch. (For details, see Section 2 and after.)

Zoom position marker



The zoom position marker can be displayed using an internal switch. For details, see Section 2 and after.

1-6-2. Character Indications

The BVP-370P is capable to display character indications in the viewfinder screen. The character indications are grouped into status indications and warning indications.

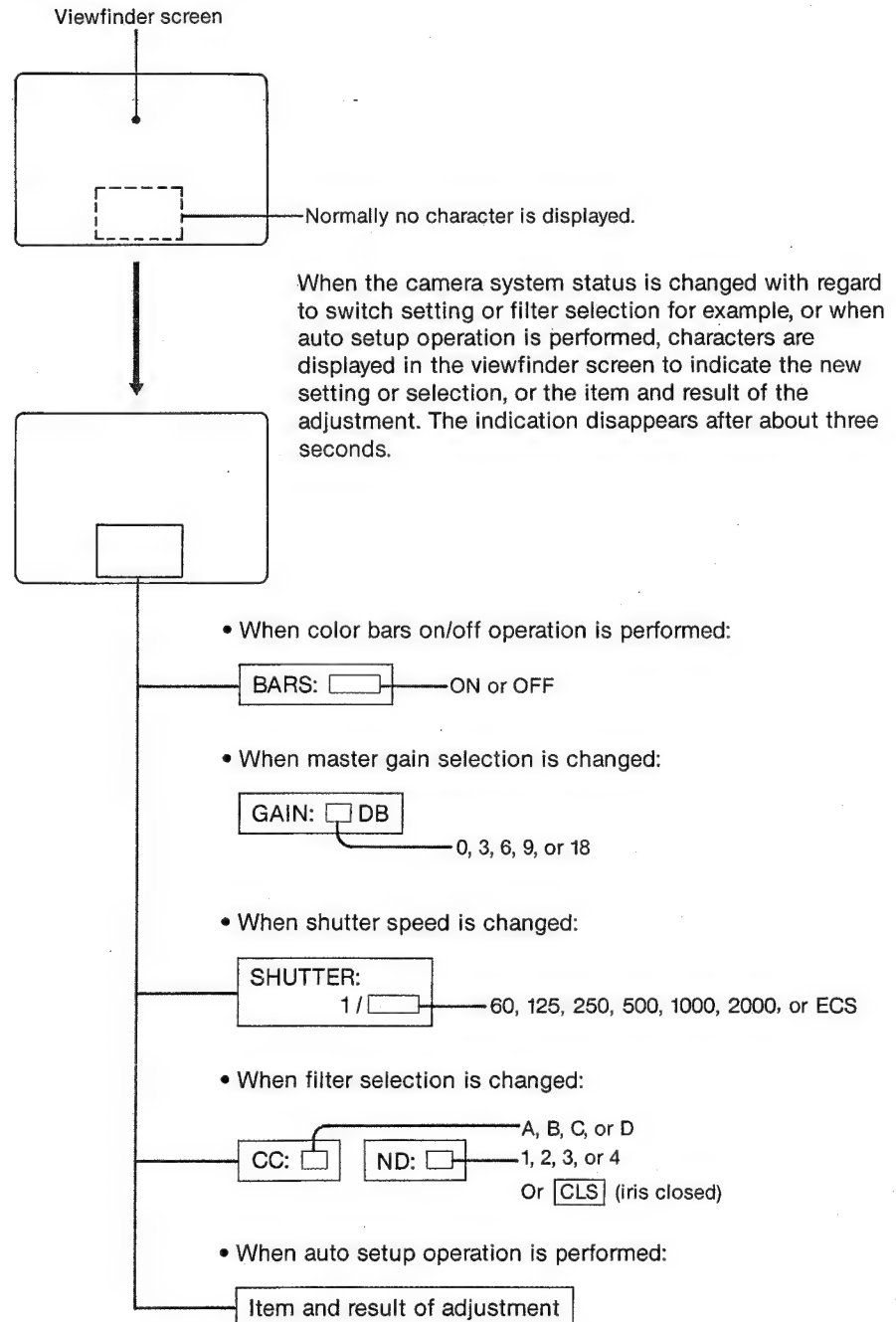
Status indications

By status indications you can check and confirm settings of switches/selectors, items and results of auto setup adjustments, and statuses of internal circuit boards. There are five pages of status indication, and change of pages can be performed using the DISPLAY switch on the rear panel. When the DISPLAY switch is set to ON, the camera is made ready to display a status indication on page 1, where normally nothing is indicated. However, when the setting of a switch or selector is changed, or when an auto setup operation is performed, the new setting or the item and result of the auto setup adjustment are displayed in characters on page 1. Once the switch is set to ON, you can change pages by pushing up the switch to the PAGE position. Each time you push, change of pages takes place in the following order:

→ (Page) 2 → 3 → 4 → 5 → 1 →

The details of the individual pages are as follows:

Status indication page 1

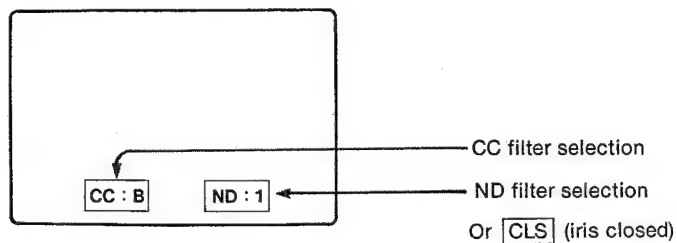


(See "1-6-3. Character Indications for Auto Setup.")

Status indication page 2

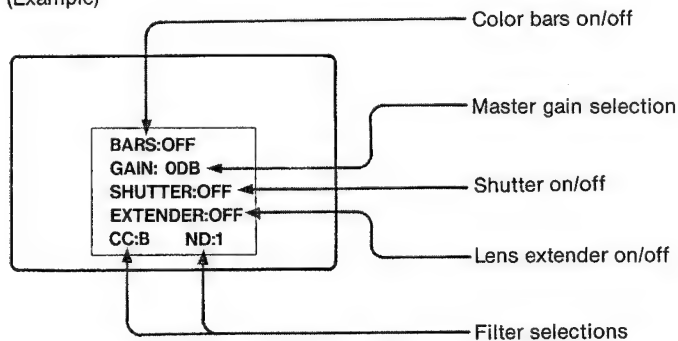
The current selections of ND and CC filters are indicated.

(Example)

**Status indication page 3**

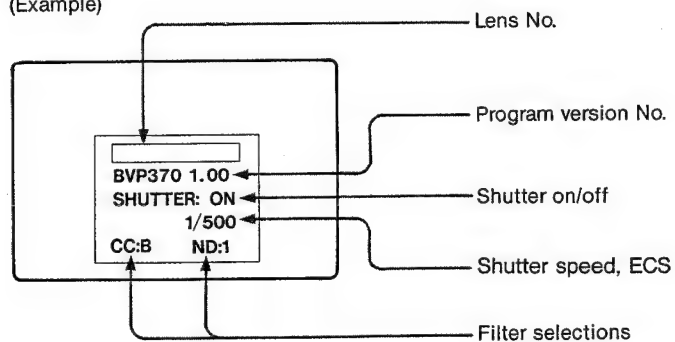
The current status is indicated with respect to color bars on/off, master gain value, shutter on/off, lens extender on/off, and filter selections.

(Example)

**Status indication page 4**

Lens No., program version No., state of shutter, shutter speed, and filter selections are indicated.

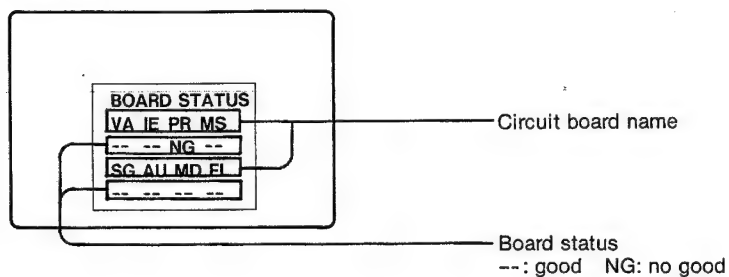
(Example)



Status indication page 5

The statuses of internal circuit boards determined by self-diagnosis of the camera are indicated.

(Example)

**Warning indications**

When a problem occurs with the line for data communications between the camera and CCU, a warning message or the result of self-diagnosis is indicated regardless of the setting of the DISPLAY switch.

NO CCU DATA

This message appears blinking when transfer of serial data from the CCU to the camera has stopped.

FRAMING ERR**PARITY ERR**

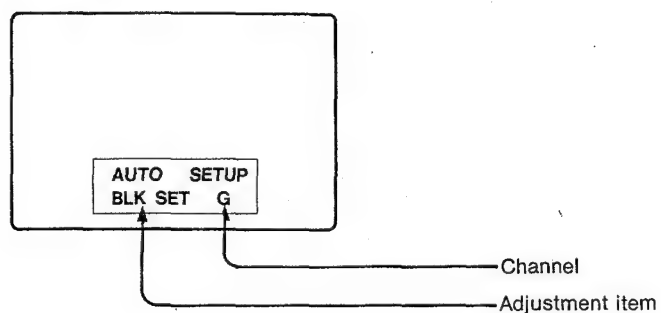
One or the other message appears blinking when an error has been detected in the serial data sent from the CCU.

1-6-3. Character Indications for Auto Setup

Indications during auto setup adjustment

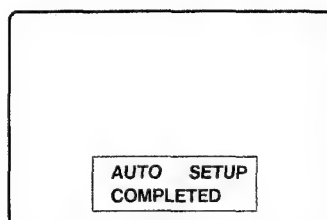
When an auto setup operation is performed with the camera being ready to display the status indication page 1, characters are displayed to indicate the adjustment item, the channel for which adjustment is being made, etc.

(Example)



Indication for completion of adjustment

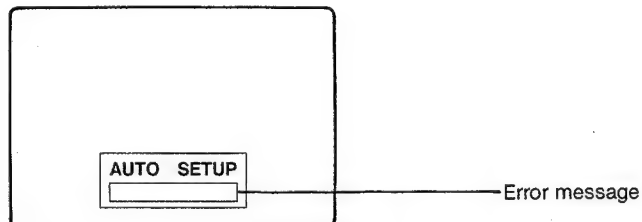
When the auto setup adjustment is completed, the following indication is displayed:



Adjustment error messages

If an error is detected during an auto setup adjustment, an indication as shown below is displayed.

(Example)

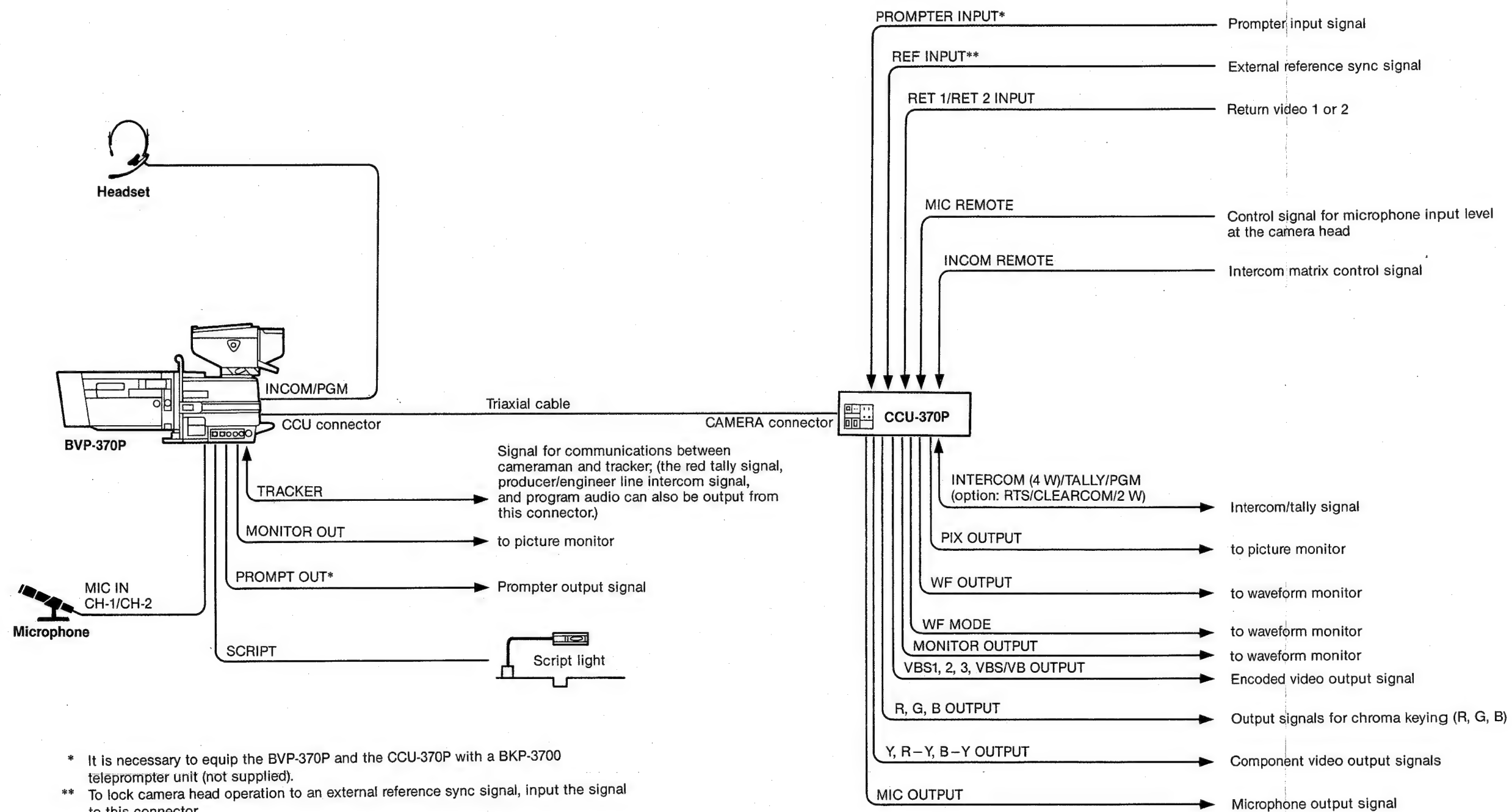


- The adjustment error messages that the BVP-370P can display are the following three:

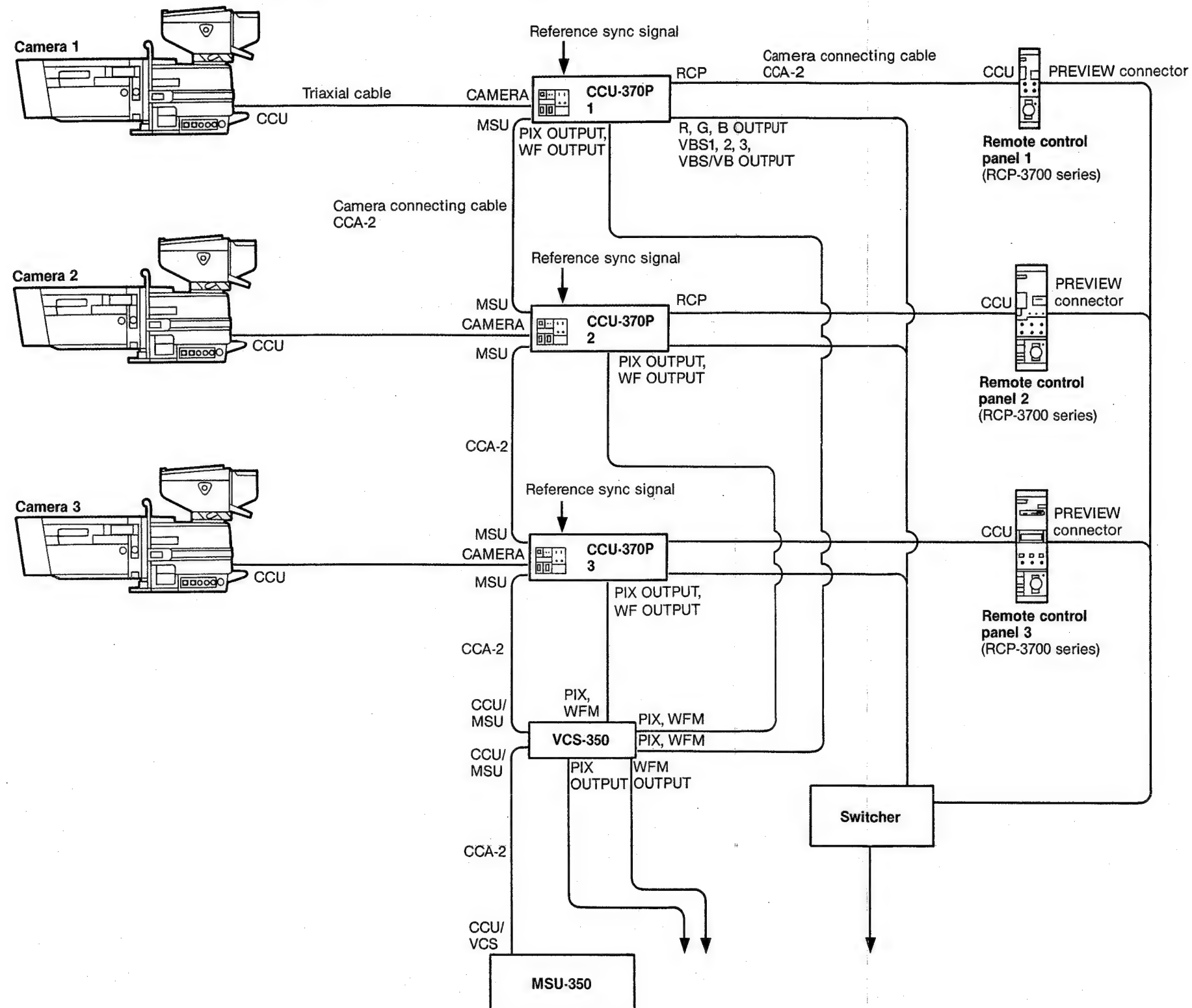
Error message	Meaning
– OVER FLOW –	The difference between the current value and the reference value is so great that the automatically adjustable range is exceeded.
– TIME LIMIT –	Adjustment was not completed within the time limit.
– LOW LEVEL –	The video output level was too low for the adjustment to be performed successfully. Increase the illumination or set the master gain to a higher value.

1-7. System Connections

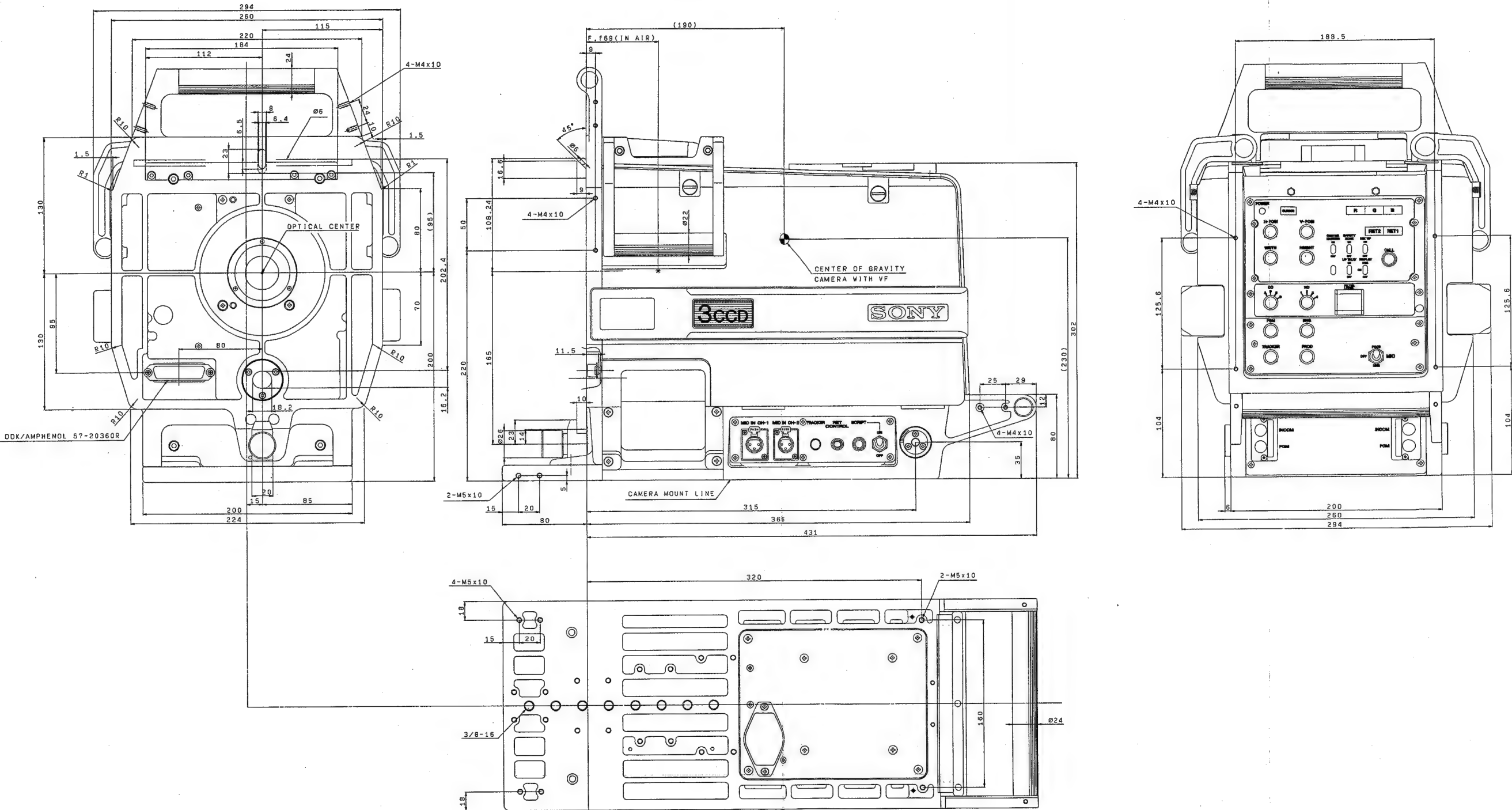
1-7-1. Connections for Single Camera Operation in Combination with the CCU-370P



1-7-2. Connections for Multiple Camera Operation

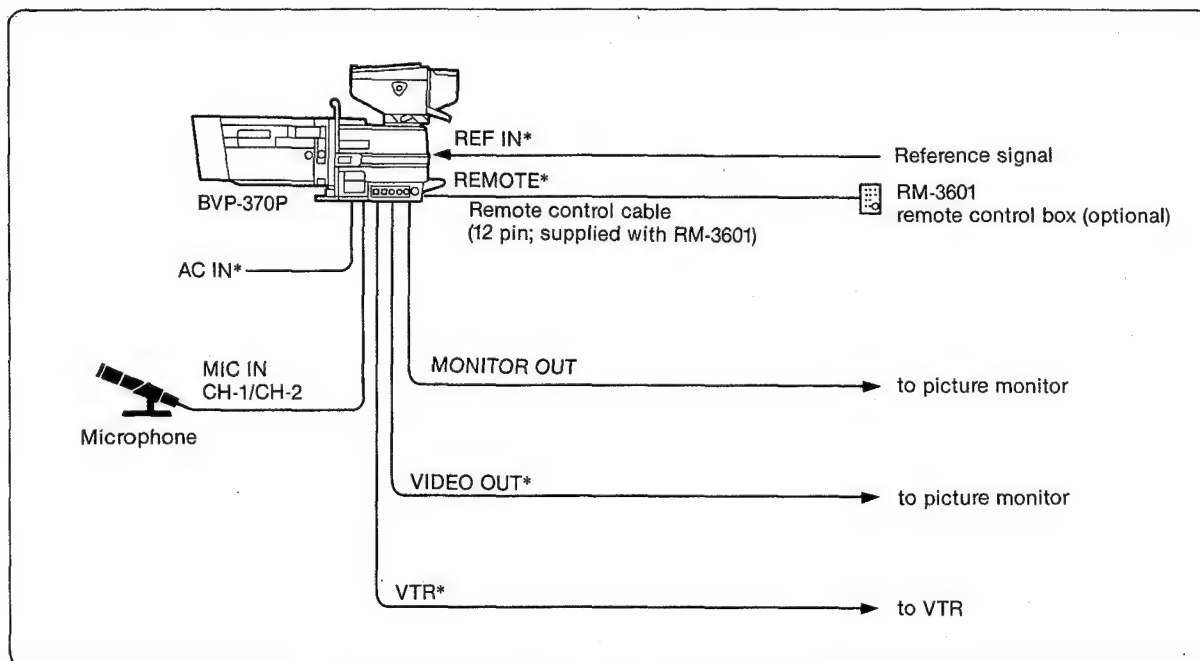


BVP-370P



1-7-3. Connections for Stand-alone Camera Operation

For stand-alone use of the BVP-370P, the BKP-370P stand-alone kit is required. It is possible to control the BVP-370P by the RM-3601 remote control box if the inside of the camera is modified. For details, consult your authorized Sony representative.



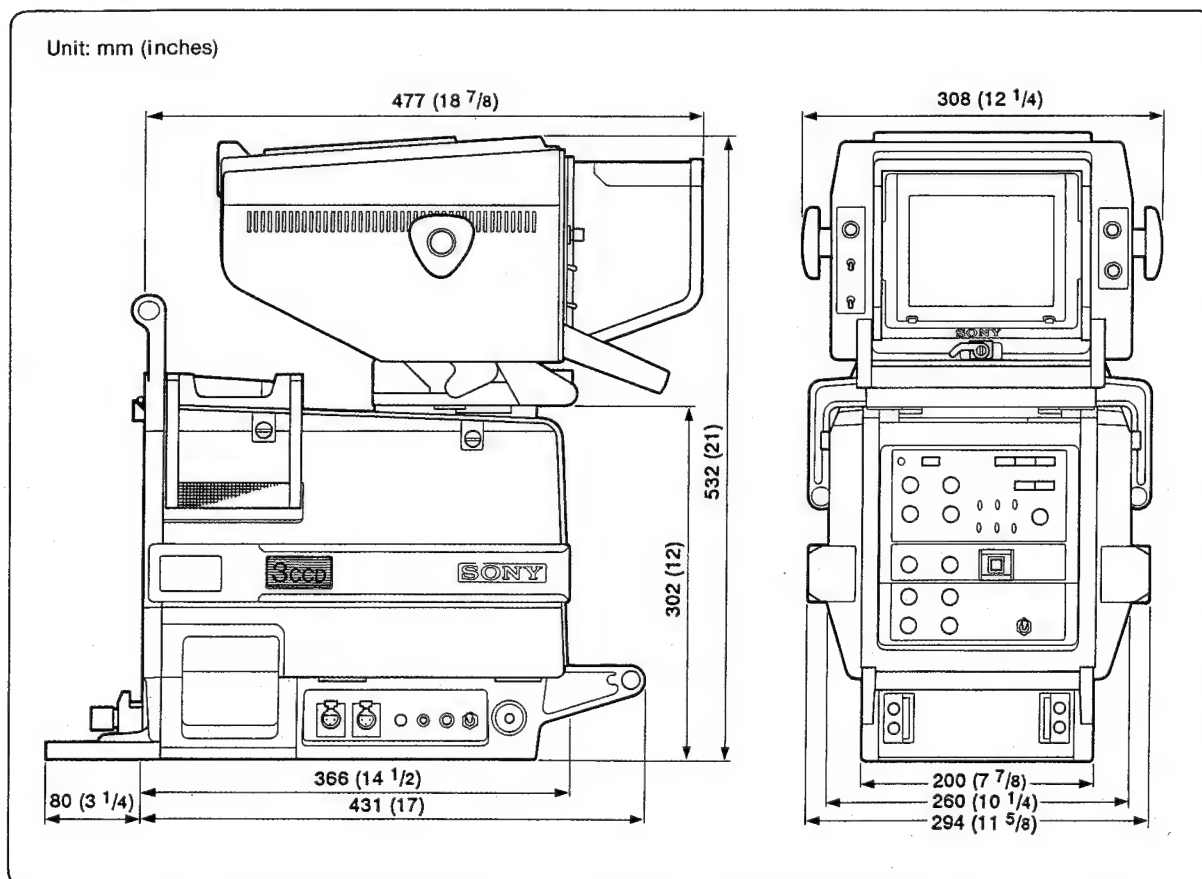
* Connector provided in the BKP-370P stand-alone kit.

1-8. Specifications

General

Imager	2/3-inch Frame Interline Transfer CCD
Image configuration	RGB 3-CCDs
Picture elements	752(h) × 582(v)
Spectral system	F1.4 prism system
Built-in filters	Color conversion filters
	A: Cross filter
	B: 3200 K
	C: 4300 K
	D: 6300 K
	ND filters
	1: Clear
	2: 1/4 ND
	3: 1/8 ND
	4: 1/16 ND
Sensitivity	2000 lux (F8 typical)
	89.9% reflection
Minimum illumination	Approx. 7.5 lux (F1.4 lens, +18 dB gain)
Video S/N	60 dB (typical)
Horizontal resolution	700 TV lines (at center)
Registration	0.05% or less on entire screen (without lens)
Geometric distortion	Not identified.
Operating temperature	−20°C to +45°C (−4°F to +113°F)
Weight	Approx. 20 kg (44 lb 1 oz) (without viewfinder)

Dimensions



Input and output connectors

CCU	Fischer type triaxial connector (1)
Lens connector	36-pin (1)
Viewfinder connector	25-pin (1)
MONITOR OUT	BNC type (1) 1.0 Vp-p, 75 ohms
PROMPT OUT*	BNC type (1) 1.0 Vp-p, 75 ohms
REF IN*	BNC type (1) 1.0 Vp-p, 75 ohms
VIDEO OUT**	BNC type (1) Composite, 1.0 Vp-p
VTR**	26-pin
AC OUT	3-pin
AC IN**	3-pin
TRACKER	10-pin (1)
RET CONTROL	6-pin (1)
SCRIPT	4-pin (1) Max. 5 W, dc 12 V
INCOM/PGM	double jack (2)
MIC IN CH-1, CH-2	XLR 3-pin (1, respectively) -60 dB

* The BKP-3700 teleprompter unit is required.

** Available with the BKP-370P stand-alone kit (optional)

Accessories supplied

Extension board A (1)
Plug for TRACKER connector (10-pin) (1)
Plug for RET CONTROL connector (6-pin) (1)
Plug for SCRIPT connector (4-pin) (1)
Lamp for red tally (2)
Fuse (6.3A) (1)
Fuse (4 A) (3)
Fuse (630mA) (1)
Metal fittings for attachment (2)
Front cover (1)
Number plate (2 sets)
Operation and maintenance manual (1)

Accessories not supplied

BKP-3700 teleprompter unit
BKP-3701 contrast control unit
BVF-77CE 7-inch monochrome viewfinder
BVF-7700P 7-inch color viewfinder
VFH-770 monitor hood (for outdoor use with BVF-77CE/7700P)
BKP-3613/3614 script holder (with a script light)
BKP-370P stand-alone kit

Recommended equipment

CCU-370P camera control unit
RCP-3710/3711/3720/3721/3730/3731 remote control unit
MSU-350 master setup unit
VCS-350 video selector
RM-3601 remote control box

Design and specifications are subject to change without notice.

Abschnitt 1. BETRIEB

1-1. Allgemeines

Die BVP-370P ist eine der leistungsstärksten Farb-Videokameras mit drei CCD-Sensorchips auf dem Markt und eignet sich hervorragend sowohl für den Einsatz im Studio als auch für nicht studiogebundene, mobile Fernsehaufnahmen (OB-Aufnahmen). Die charakteristischen Merkmale dieser Kamera sind die neuentwickelten 2/3-Zoll-FIT-CCD-Bildsensoren (Frame Interline Transfer) mit HAD-Photodioden (Hole-Accumulated Diode) und die extrem hohe Auflösung von 440 000 Bildpunkten.

Bei dieser kompakten und leichten Kamera mit geringer Leistungsaufnahme bilden die neuesten Digital- und Analogbauteile und ergonomische Gestaltung eine harmonische Einheit. Sie zeichnet sich durch verschiedene innovative Funktionen aus, u.a. präzise, von modernsten Mikrocomputern gesteuerte Setup-Operation, und ist einfach in Bedienung und Handhabung.

In der Grundkonfiguration wird die BVP-370P mit einem Triaxialkabel an die Kamera-Steuereinheit CCU-370P angeschlossen und von der Master-Setup-Einheit MSU-350 bzw. einem Fernbedienpult der Baureihe RCP-3700 aus über die CCU-370P gesteuert.* Neben diesen Komponenten sind außerdem der Video-Selector VCS-350 und eine Vielzahl weiterer Komponenten als Sonderzubehör erhältlich. Auf diese Weise läßt sich für jeden Zweck das optimale Kamerasystem zusammenstellen, von der Programmproduktion im Studio bis zu OB-Aufnahmen vor Ort. Ein weiteres herausragendes konstruktives Merkmal dieser Kamera ist ihre große Flexibilität in Bezug auf künftige Systemerweiterungen.

* Soll diese Kamera ohne die Kamera-Steuereinheit CCU-370P betrieben werden (Einzelbetrieb), so sind der Einzelbetrieb-Adaptersatz BKP-370P und die Fernsteuerbox RM-3601 erforderlich (beides Sonderzubehör).

1-1-1. Besondere Merkmale

Hohe Bildauflösung

Dank der Anwendung neuentwickelter FIT-HAD-CCD-Bildsensoren ist der vertikale „Schmier-Pegel“ (Smear Level) der BVP-370P extrem niedrig und ihr „Flacker-Pegel“ (Flare Level) erheblich geringer als bei Kameras, die mit CCD-Sensoren herkömmlicher Bauart ausgestattet sind. „Zwei-Zeilen-Bildverstärkung“ (Two-line Image Enhancement) und zahlreiche weitere Merkmale, die die Möglichkeiten einer CCD-Kamera voll ausschöpfen, sind für diese Gerät benutzt.

Hoher Rauschabstand

Der hohe Rauschabstand von 60 dB (typisch) ist das gemeinsame Resultat der Anwendung eines Hochleistungs-CCD-Sensors und der umfassenden Nutzung aller Möglichkeiten, die fortgeschrittene Video-Schaltungen und Integrationstechnologien bieten.

Großer Dynamikbereich

Die automatischen/manuellen Kniepunkt- und Knieneigungs-Einstellungen ermöglichen ein natürliches und scharfes Bild bis zu 600% der normalen Lichtintensität.

Hohe Empfindlichkeit

Die Kamera zeichnet sich durch eine Empfindlichkeit von F8 bei 2000 Lux (typisch) aus. Wird die Videopiegelverstärkung um 18 dB angehoben, so ist bei einer Mindestgegenstandsbeleuchtung von 7,5 Lux ein ausreichender Ausgangspegel erzielbar.

Automatische Setup- und Datenspeicher-Funktionen

Integrierte Mikrocomputer garantieren präzise und schnelle Setup-Einstellungen. Mit Hilfe der vorhandenen Speicher-Funktionen lassen sich Einstellungsdaten im Kamerakopf speichern und jederzeit zur automatischen Kameraeinstellung abrufen. Dadurch kann die Kamera innerhalb kurzer Zeit eingerichtet und die erforderliche Kamerawartungszeit reduziert werden.

Elektronischer Verschuß

Die Auslösezeit des elektronischen Verschlusses der BVP-370P läßt sich in sechs Stufen einstellen. Auf diese Weise können durch Wahl der optimalen Verschußzeit auch Objekte in rascher Bewegung mit einem klaren Bild aufgenommen werden.

ECS-Funktion (Extended Clear Scan)

(bei BVP-370P mit Serien-Nr. 42701 und höher)

Neben der oben erwähnten Verschuß-Einstellfunktion bieten die Kameras mit ihrer ECS-Funktion eine Möglichkeit zur Feineinstellung der Verschußzeit (in etwa 600 stufen von 1/25 bis 1/9000 s), um Monitor-Bildschirme oder Filme störstreifenfrei aufnehmen zu können.

1) Clear Scan
„Clear Scan“ ist ein Warenzeichen der Sony Corporation.

Flexible Tonwiedergabe

Die BVP-370P ist für zwei Mikrofonkanäle, zwei Gegensprechkanäle und einen Kanal für Audio-Signalquelle ausgelegt. Die Gegensprechkanäle können durch entsprechende Betätigung der Wahlschalter an der Kamerarückseite jeweils mit der Produktions- oder Technik-Leitung verbunden werden.

Eigenprüfung

Beim Auftreten von Störungen in der BVP-370P steht eine Eigenprüffunktion zur Erfassung und Eingrenzung der jeweiligen Störung zur Verfügung, so daß die Störungssuche erleichtert wird.

Status- und Warnanzeigen auf dem Sucherschirm

Mit Hilfe des eingebauten Zeichengenerators lassen sich Status- und Warnanzeigen auf dem Bildschirm des Suchers darstellen. Verschiedene Aufnahmeanhaltsmarkierungen (Box-Cursor, Zentrier-, Sicherheitszonen- und Zoomstellungsmarkierung) können ebenfalls auf den Schirm gebracht werden.

Kombinierbar mit hochwertigem 7-Zoll-Sucher

Die BVP-370P kann zusammen mit dem 7-Zoll-Monochromsucher BVF-70ACE oder dem 7-Zoll-Farbsucher BVF-7000AQM (Sonderzubehör) verbunden werden. Der am Kamerakopf befestigte Sucher läßt sich leicht um jeweils 40° nach oben oder unten kippen bzw. um 90° nach links oder rechts schwenken. Außerdem ist es möglich, den Sucher nach Wunsch in einer Position zu fixieren. Der Ein- und Ausbau des Suchers ist auf einfache Weise ohne Verwendung von Sonderwerkzeugen möglich.

1-1-2. Datenspeicher-System

Die BVP-370P kann die Einstellungsdaten in Form von drei Dateiarten speichern, die im folgenden beschrieben werden.

1. Referenz-Datei

In dieser Datei werden die Bezugswerte für die Auto-Setup-Einstellung untergebracht.

2. Setup-Dateien

Diese Dateien dienen zum Abspeichern von automatisch oder manuell gewählten Setup-Daten bei unterschiedlichen Aufnahmebedingungen vor dem eigentlichen Beginn der Bildaufzeichnung.

Die abgespeicherten Setup-Daten können jederzeit aus einer beliebigen Datei aufgerufen werden, um das Kamerasystem automatisch auf die gleichen Aufnahmebedingungen einzustellen wie bei der Erstellung und Abspeicherung der Datei.

3. Szenen-Datei

Daten für bestimmte „Szenenfärbungen“ lassen sich in einer Szenen-Datei ablegen. So können z.B. die während der Probe an eine bestimmte Szene angepaßten Daten in einer Szenen-Datei gespeichert werden und stehen dann jederzeit zum Abruf bereit, um das Kamera-System in kurzer Zeit automatisch einzurichten. Die Aufzeichnung der jeweiligen Szene kann dann unverzüglich beginnen.

Besonderheiten beim Umgang mit Dateien

Das Erstellen, Speichern und Aufrufen von Dateien ist mit der Master-Setup-Einheit MSU-350 (Sonderzubehör) oder einem der Fernbedienpulte RCP-3720/3721/3730/3731 (Sonderzubehör) möglich.

Art und Anzahl der möglichen Dateien richten sich jeweils nach der Komponente oder dem Fernbedienpult. Einzelheiten hierzu entnehmen Sie bitte der Bedienungs- und Wartungsanleitung zu Master-Setup-Einheit bzw. Fernbedienpult.

1-2. Systemaufbau

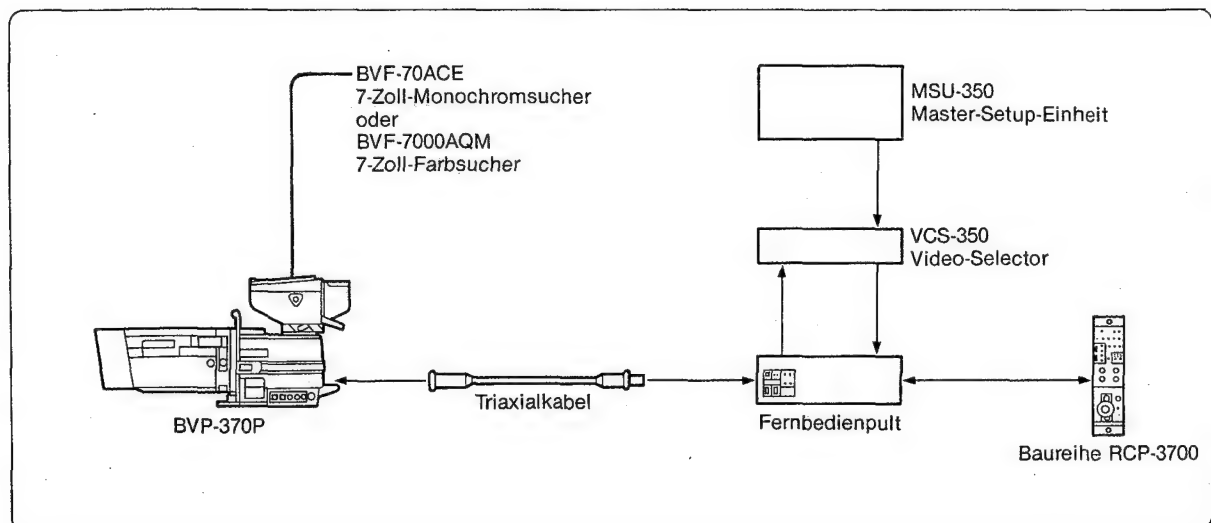
1-2-1. Grundkonfiguration

Zur Zusammenschaltung von BVP-370P und Kamera-Steuereinheit CCU-370P ist ein Triaxialkabel erforderlich.

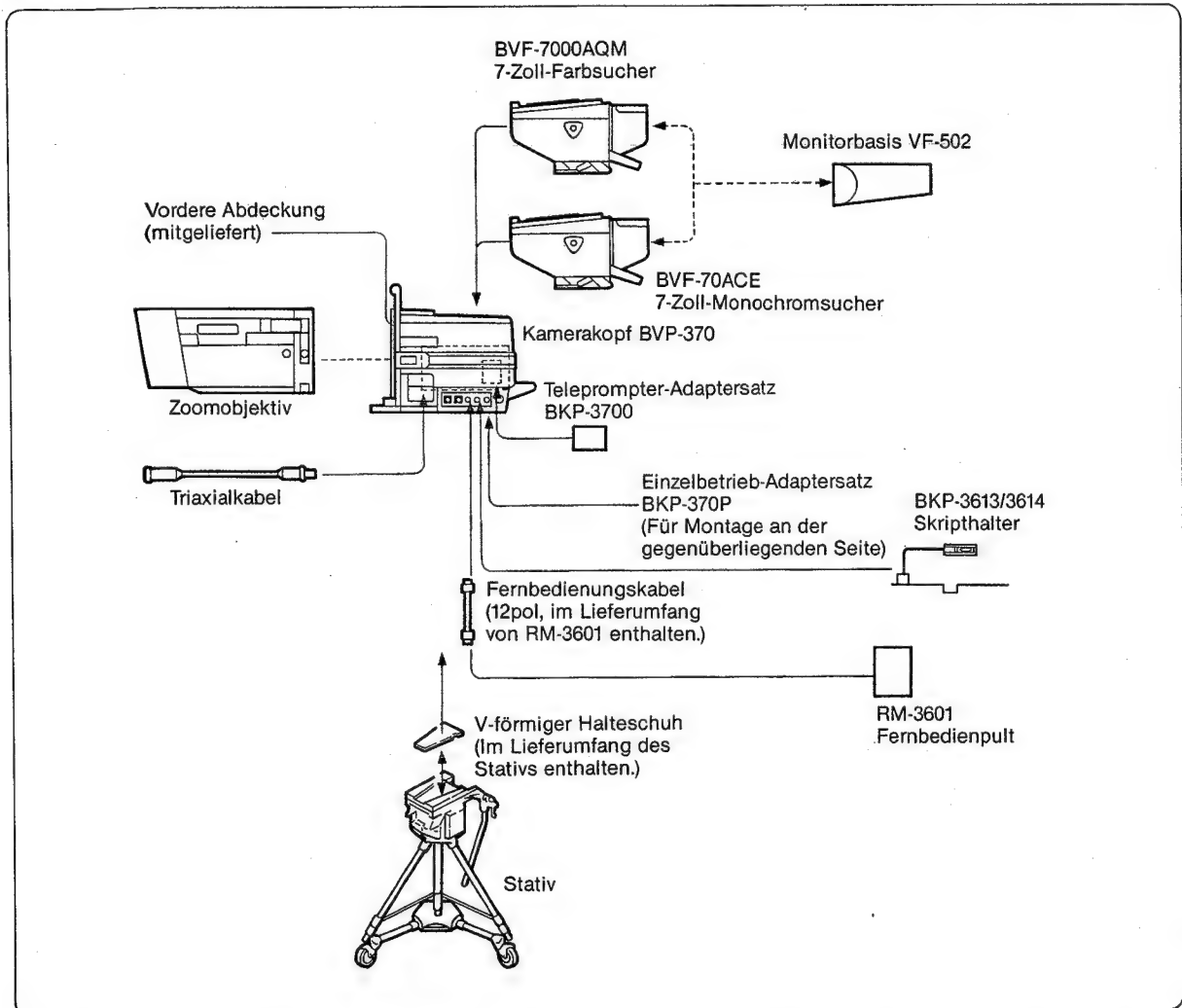
Die zulässige Höchstlänge bei der Signalübertragung über Triaxialleitungen richtet sich nach dem jeweils verwendeten Kabel (siehe folgende Tabelle):

Kabelbezeichnung	Durchmesser	Zulässige Höchstlänge
Fujikura 9.6/2.22 EXTEF.	14,5 mm	3000 m (2400 m*)
Belden 9232	13,2 mm	2250 m (1800 m*)
Fujikura 4.8/1.0 EFTXF	8,5 mm	1500 m (1200 m*)

* Zur Rückführungssignalübertragung



1-2-2. Systemkonfiguration mit Sonderzubehörkomponenten

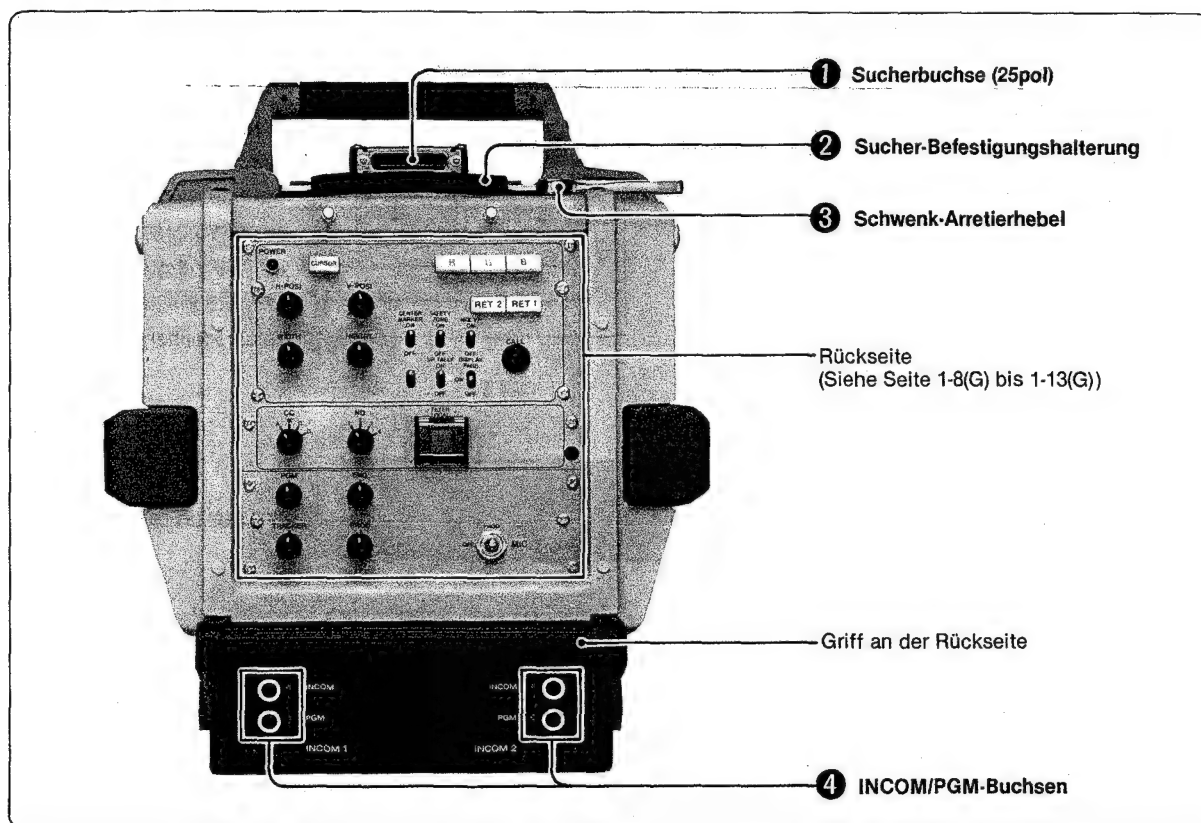


Zur Beachtung:

- BVF-70ACE und BVF-7000AQM mit Standard-Blendschutz
- VF-502 zur Verwendung mit Sucher BVF-70ACE/7000AQM bei Aufnahmen im Freien
- Der BKP-3700 ist bei Kamerakopf und Kamera-Steuereinheit erforderlich, wenn ein Teleprompter-System an das Kamerasystem angeschlossen ist.
- BKP-3613 ist für Loseblatt-Skripts und BKP-3614 für gebundene Skripts bestimmt. Beide Skripthalter verfügen über eine Leselampe.
- BKP-370P verfügt über Wechselspannungseingänge und -ausgänge, einen Videocorder-Anschluß und eine Codierschaltung, die beim Einzelbetrieb der Kamera erforderlich ist.

1-3. Lage und Funktion der Teile und Bedienelemente

1-3-1. Rückseite



1 Sucherbuchse (25pol)

Dieser Anschluß dient als Schnittstelle zur Verbindung zwischen dem Kamerakopf und dem Sucher.

2 Sucher-Befestigungshalterung

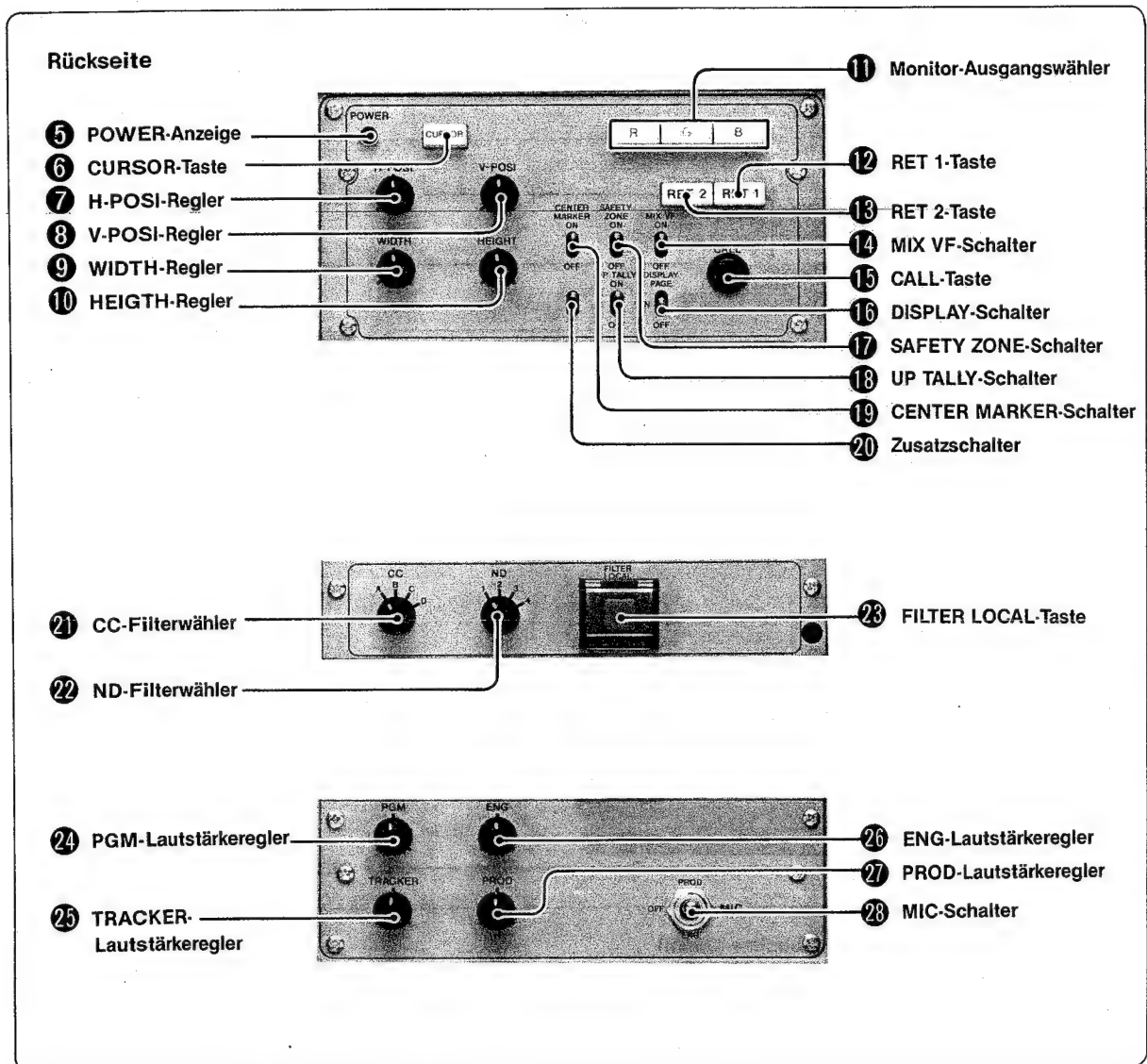
Der Sucher wird an dieser Halterung angebracht. Einzelheiten zur Suchermontage entnehmen Sie bitte Absatz „1-4-3. Anbringen des Suchers“.

3 Schwenk-Arretierhebel

Ist dieser Hebel zur Rückseite der Kamera geschoben, so läßt sich der Schwenkuntersatz des Suchers nur mit einem gewissen Kraftaufwand gegen einen Widerstand (schwergängig) drehen. In Mittelstellung des Hebels ist der Schwenkuntersatz frei beweglich. Steht der Hebel an der Kameravorderseite, so ist der Schwenkuntersatz in seiner Lage verriegelt.

4 INCOM/PGM-Buchsen (Doppelbuchse)

Diese Buchsen sind zum Anschluß einer Hör-Sprechgarnitur bestimmt. Die obere Buchse ist für den Gegensprechkanal und die untere für den Audio-Signalkanal bestimmt.



5 POWER-Anzeige

Diese Anzeige leuchtet bei eingeschalteter Kamera.

6 CURSOR-Taste

Durch Drücken dieser Taste erscheint der Box-Cursor auf dem Sucherschirm. Bei erneutem Tastendruck verschwindet der Cursor wieder. Einzelheiten hierzu entnehmen Sie bitte „1-6. Anzeigen im Sucher“.

7 H-POSI-Regler

Zur Einstellung der Horizontalposition des Box-Cursors auf dem Sucherschirm.

8 V-POSI-Regler

Zur Einstellung der Vertikalposition des Box-Cursors auf dem Sucherschirm.

9 WIDTH-Regler

Zur Einstellung der Box-Cursorbreite auf dem Sucherschirm innerhalb der Sicherheitszone (siehe Beschreibung unter 17).

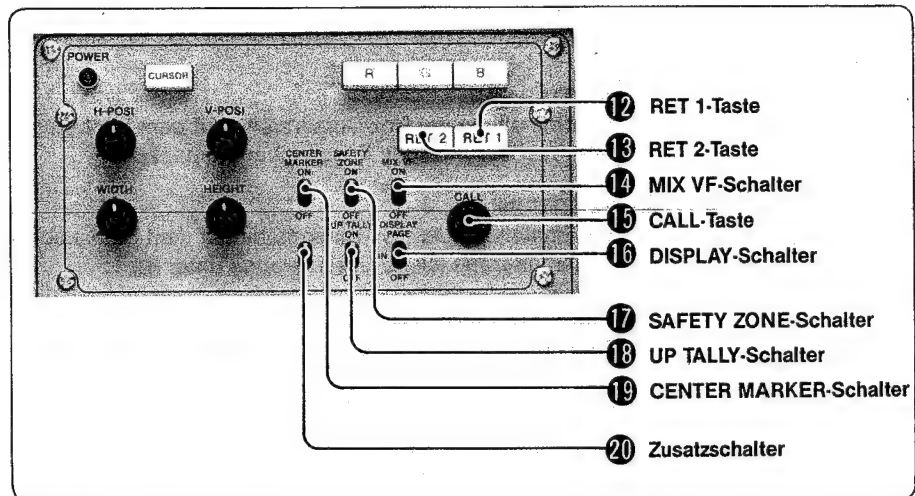
10 HEIGHT-Regler

Zur Einstellung der Box-Cursorhöhe auf dem Sucherschirm innerhalb der Sicherheitszone (siehe Beschreibung unter 17).

11 Monitor-Ausgangswähler

Zur Wahl der Videosignale, die auf dem Sucherschirm dargestellt werden. Ist Schalter EXT VF OUT/RET OUT am MS-Bedienfeld hinter der Kameraabdeckung in Stellung EXT VF OUT, so lassen sich mit diesen Tasten die Videosignale wählen, die dem externen Monitor zugeführt werden sollen, der mit Ausgang MONITOR OUT 35 verbunden ist. Die Ausgangswähler wirken bei individueller oder kombinierter Betätigung.

- Sind die Tasten R, G und B gleichzeitig betätigt, so wird das Leuchtdichtesignal (Y-Signal) dem Sucher zugeführt (und dem externen Monitor, falls Schalter EXT VF OUT/RET OUT auf EXT VF OUT steht).
- Ist kein Monitor-Ausgangswähler betätigt, wird einem Monochrom-Sucher (externem Monochrom-Monitor bei Schalterstellung EXT VF OUT) das Leuchtdichtesignal und einem Farbsucher das G-Signal zugeführt.



12 RET 1-Taste

Wird diese Taste gedrückt, so läßt sich Rückführungsvideosignal 1 auf dem Sucherschirm überwachen. Ist Schalter EXT VF OUT/RET OUT in Stellung EXT VF OUT, so wird MONITOR OUT-Anschluß 35 auf die Ausgabe des Rückführungsvideosignals 1 umgeschaltet.

Bei erneutem Tastendruck erscheint wieder das Kamerabild auf dem Sucherschirm (oder dem externen Monitor bei Schalterstellung EXT VF OUT).

Ist Schalter EXT VF OUT/RET OUT in Stellung RET OUT, so wird Rückführungsvideosignal 1 unabhängig von der Stellung der Monitor-Ausgangswähler und der RET 1-Taste stets über den MONITOR OUT-Anschluß ausgegeben. (Die Ausgabe von Rückführungsvideosignal 2 erfolgt nur bei Betätigung der RET 2-Taste 13).

13 RET 2-Taste

Ist neben Rückführungsvideosystem 1 ein weiteres Rückführungsvideosystem (System 2) in Betrieb, so läßt sich Rückführungsvideosignal 2 auf dem Sucherschirm überwachen. Ist Schalter EXT VF OUT/RET OUT in Stellung EXT VF OUT, wird der MONITOR OUT-Anschluß 35 auf die Ausgabe von Rückführungsvideosignal 2 umgeschaltet.

Bei erneutem Tastendruck erscheint das Kamerabild wieder auf dem Sucherschirm (oder dem externen Monitor bei Schalterstellung EXT VF OUT).

- Sind beide Tasten RET 1 und RET 2 betätigt, so wird (unabhängig von der Stellung des Schalters EXT VF OUT/RET OUT) Rückführungsvideosignal 1 ausgegeben.

14 MIX VF-Schalter

Wird bei betätigtem MIX VF-Schalter (Stellung ON) die RET 1-Taste 12 oder RET 2-Taste 13 gedrückt, so erfolgt eine Mischung von Kamera-Ausgangssignal und Rückführungsvideosignal 1 oder 2. Das resultierende Mischsignal läßt sich auf dem Sucherschirm überwachen.

Das Mischungsverhältnis der beiden Signale kann mit dem Potentiometer in der CCU-370P eingestellt werden. (Einzelheiten hierzu entnehmen Sie bitte Teil 2 und den folgenden Abschnitten im Bedienungs- und Wartungshandbuch für CCU-370P)

Ist der MIX VF-Schalter auf OFF gestellt, wenn RET 1- oder RET 2-Taste gedrückt wird, so läßt sich nur Rückführungsvideosignal 1 bzw. 2 auf dem Sucherschirm darstellen.

15 CALL-Taste

Diese Taste dient zum Rufen des Bedienpersonals für Kamera-Steuereinheit (CCU), Fernbedienpult (RCP) oder Master-Setup-Einheit (MSU). Beim Drücken der Taste leuchtet jeweils die rote Signallampe an CCU, RCP oder MSU auf.

16 DISPLAY-Schalter

Mit diesem Schalter können auf Wunsch die Status-Anzeigen über die Einstellung von Bedienelementen- oder Parameter und Ergebnisse von Automateinstellungen auf dem Sucherschirm eingeblendet werden.

PAGE: Bei jedem Tastendruck in dieser Stellung wird auf die nächstfolgende Status-Anzeigeseite weitergeschaltet.

ON: Freigabeposition für die Status-Anzeigefunktion.

OFF: Sperrposition für die Status-Anzeigefunktion.

17 SAFETY ZONE-Schalter

Ist dieser Schalter auf ON gestellt, erscheint auf dem Sucherschirm ein Rahmen (als Begrenzung der Sicherheitszone), dessen Fläche 90% des Kamera-Aufnahmebilds umfaßt. In Schalterstellung OFF erfolgt keine Rahmeneinblendung. Einzelheiten hierzu entnehmen Sie bitte „1-6. Anzeigen im Sucher“.

Der Anteil der Sicherheitszone läßt sich mit Hilfe des internen Schalters bis auf 80% steigern. (Einzelheiten hierzu entnehmen Sie bitte Teil 2 und den folgenden Abschnitten.)

18 UP TALLY-Schalter

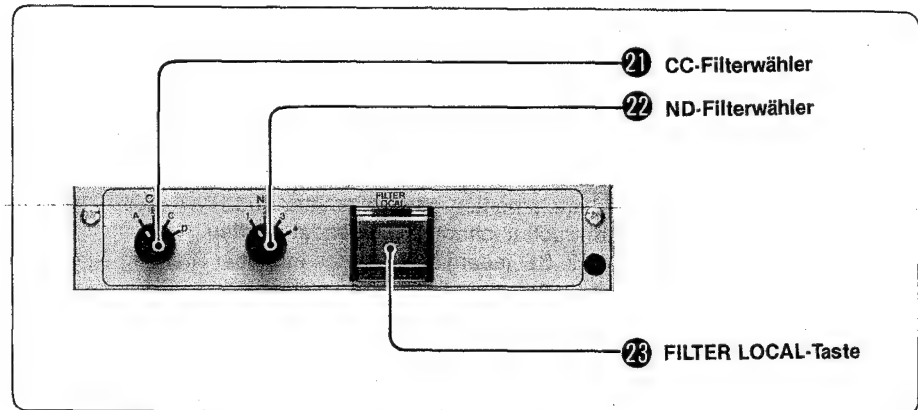
Mit diesem Schalter werden alle Signallampen (d.h. extern, seitlich und frontal) außer der roten Signallampe am Sucher aktiviert bzw. deaktiviert.

19 CENTER MARKER-Schalter

Steht dieser Schalter auf ON, so wird zur Markierung des Aufnahmebildzentrums in der Mitte des Suchers ein weißes Kreuz eingeblendet. In Schalterstellung OFF erscheint diese Markierung nicht. Einzelheiten hierzu entnehmen Sie bitte „1-6. Anzeigen im Sucher“.

20 Zusatzschalter

Nicht belegt.



21 CC-Filterwähler

Leuchtet Taste FILTER LOCAL 23 auf, so läßt sich mit diesem Bedienelement das Filter wählen, das zu den gerade herrschenden Lichtverhältnissen paßt.

Position	Filter (Farbtemperatur)
A	Kreuzfilter
B	3200 K
C	4300 K
D	6300 K

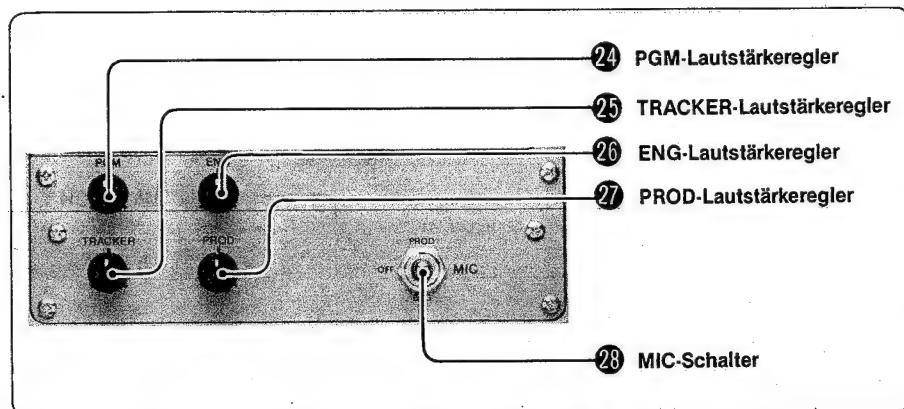
22 ND-Filterwähler

Leuchtet Taste FILTER LOCAL 23 auf, so läßt sich mit diesem Bedienelement das passende ND-Filter wählen.

Position	Filter
1	Klar
2	1/4 ND
3	1/8 ND
4	1/16 ND

23 FILTER LOCAL-Taste

Sobald die Kameraabdeckung geöffnet und diese Taste gedrückt ist und aufleuchtet, läßt sich mit Hilfe von CC-Filterwähler 21 oder ND-Filterwähler 22 ein passendes Farbfilter oder ND-Filter wählen. Nach erneutem Tastendruck (Ausraststellung) geht die Filter-Wahlfunktion auf MSU/CCU über.



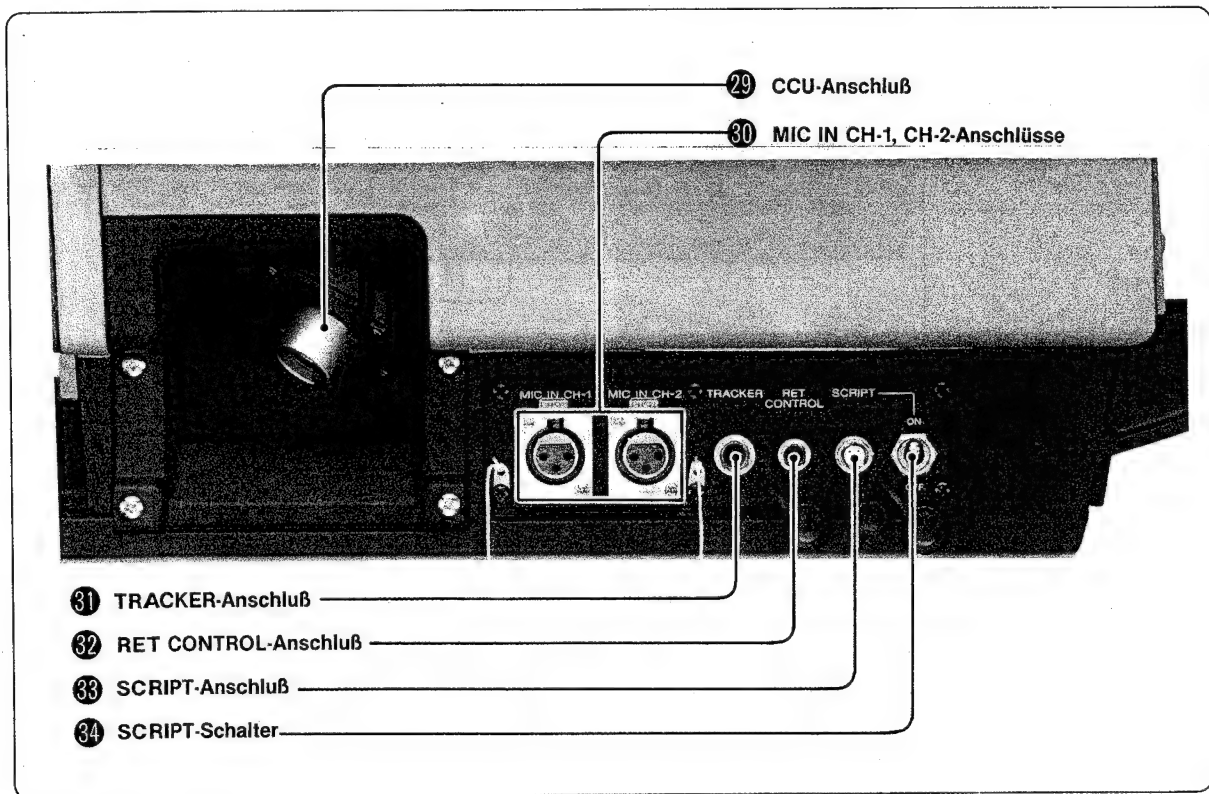
- 24 PGM-Lautstärkeregler**
Zur Einstellung der Lautstärke der Audio-Programmquelle.
- 25 TRACKER-Lautstärkeregler**
Zur Einstellung des Audio-Ausgangspegels aus dem TRACKER-Anschluß 31.
- 26 ENG-Lautstärkeregler**
Zur Einstellung des Audio-Ausgangspegels auf dem Technik-Sprechkanal.
- 27 PROD-Lautstärkeregler**
Zur Einstellung des Audio-Ausgangspegels auf dem Produktions-Sprechkanal.
- 28 MIC-Schalter**

PROD: Das Mikrofon der Hör-Sprechgarnitur ist mit dem Produktions-Sprechkanal verbunden.

ENG: Das Mikrofon der Hör-Sprechgarnitur ist mit dem Technik-Sprechkanal verbunden.

OFF: Das Mikrofon der Hör-Sprechgarnitur ist vom Gegensprechsystem getrennt.

1-3-2. Seitliche Anschluß-Felder



29 CCU-Anschluß

Dieser Anschluß wird über ein Triaxialkabel mit dem CAMERA-Anschluß an der CCU-370P verbunden. Alle Signale des BVP-370P-Systems (z.B. Video-, Audio- und Steuersignale) werden über dieses Kabel zwischen Kamera und Kamera-Steuereinheit übertragen. Auch die Stromversorgung der Kamera erfolgt über dieses Kabel.

30 MIC IN CH-1, CH-2-Anschlüsse

Die Ausgangssignale von zwei Mikrofonkanälen können hier abgegriffen werden.

31 TRACKER-Anschluß (10pol)

Der Kameramann kann über diesen Anschluß mit der Tracker-Einheit kommunizieren. Darüber hinaus dient dieser Anschluß auch als Ausgang für das Rotsignal, das Produktions-/Technik-Sprechkanalsignal und das Audio-Programmsignal.

32 RET CONTROL-Anschluß (6pol)

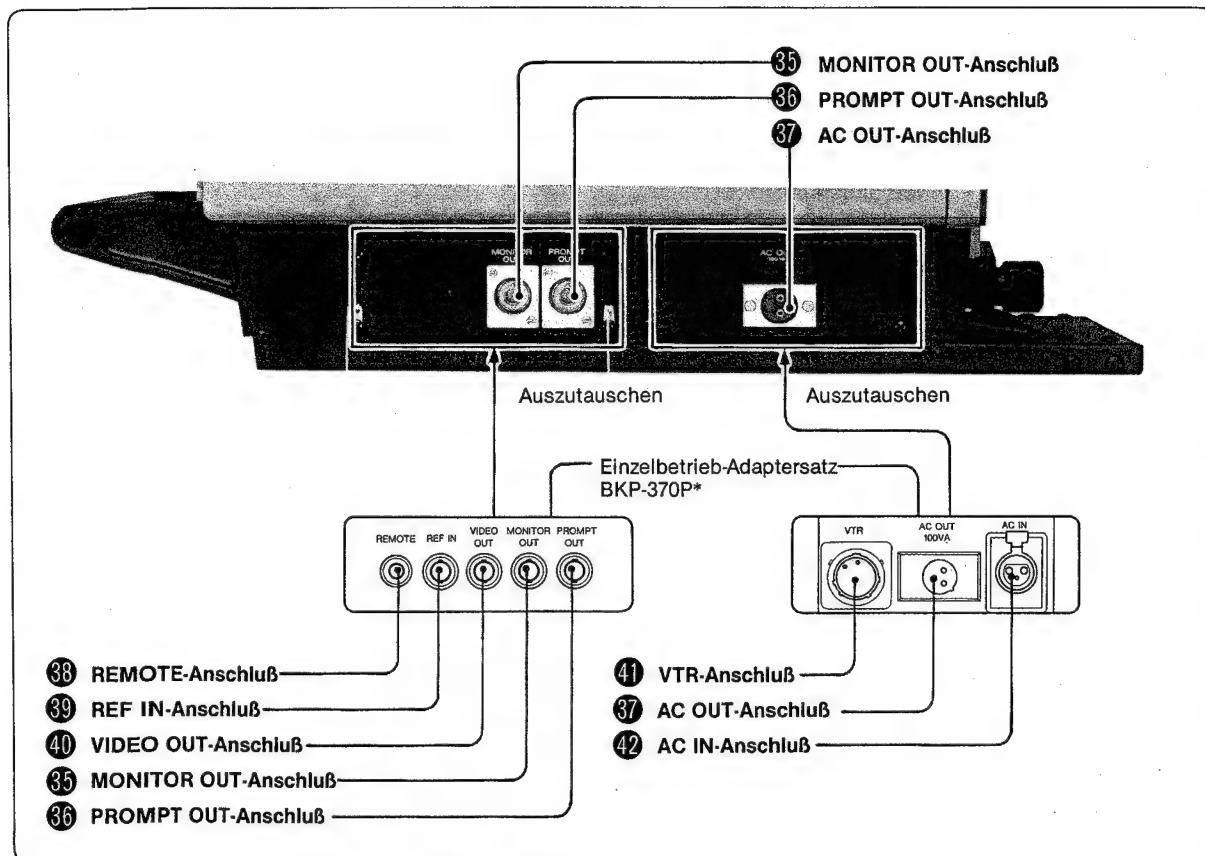
Zum Anschluß einer externen Einheit, mit der fernbedient zwischen Rückführungsvideosignal 1 und 2 umgeschaltet sowie das Sprechkanalmikrofon ein-/ausgeschaltet werden kann.

33 SCRIPT-Anschluß (4pol)

An diesem Anschluß wird die Betriebsspannung der Leselampe (für max. 5 W) abgegriffen.

34 SCRIPT-Schalter

Zum Ein- und Ausschalten der Leselampe, die mit dem SCRIPT-Anschluß 33 verbunden ist.



35 MONITOR OUT-Anschluß

Ist Schalter EXT VF OUT/RET OUT am MS-Bedienfeld hinter der Kameraabdeckung in Stellung EXT VF OUT, wird über diesen Anschluß das Signal ausgegeben, das mit den Monitor-Ausgangswählern 11 an der Rückseite gewählt worden ist. In Schalterstellung RET OUT wird über diesen Anschluß ein Rückführungsvideosignal ausgegeben. (Normalerweise erfolgt die Ausgabe von Rückführungsvideosignal 1. Wird jedoch die RET 2-Taste 13 an der Rückseite gedrückt, so dient dieser Anschluß als Ausgang für Rückführungsvideosignal 2.)

36 PROMPT OUT-Anschluß (BNC)

Sind sowohl Kamera als auch Kamera-Steuereinheit mit dem Prompter-Adaptersatz BKP-3700 ausgestattet, wird über diesen Anschluß das Signal für den Prompter-Monitor ausgegeben.

37 AC OUT-Anschluß (3pol)

Über diesen Anschluß erfolgt die Stromversorgung (220 V Wechselspannung) der angeschlossenen externen Komponenten. Durch Austausch des Steckverbinders in der Kamera gegen den jeweils passenden Typ können auch Betriebswechselspannungen von 100, 120 und 240 V abgegriffen werden. Einzelheiten hierzu entnehmen Sie bitte Teil 2 und den folgenden Abschnitten.

* Nach dem Austausch des Anschlußfelds auf der linken Kameraseite gegen den Einzelbetrieb-Adaptersatz BKP-370P (Sonderzubehör) kann die BVP-370P ohne Anschluß an die Kamera-Steuereinheit eingesetzt werden. (Einzelheiten zum Einzelbetrieb entnehmen Sie bitte Seite 1-41(G) sowie Teil 2 und den folgenden Abschnitten.)

38 REMOTE-Anschluß

Zum Anschluß der Fernsteuerbox RM-3601 zur Steuerung der Kamera bei Einzelbetrieb.

39 REF IN-Anschluß (BNC)

Eingang für das externe Bezugssignal (FBAS bzw. FBA), mit dem die Kamera bei Einzelbetrieb synchronisiert wird.

40 VIDEO OUT-Anschluß (BNC)

Beim Einzelbetrieb der Kamera wird über diesen Anschluß ein codiertes Videosignal ausgegeben.

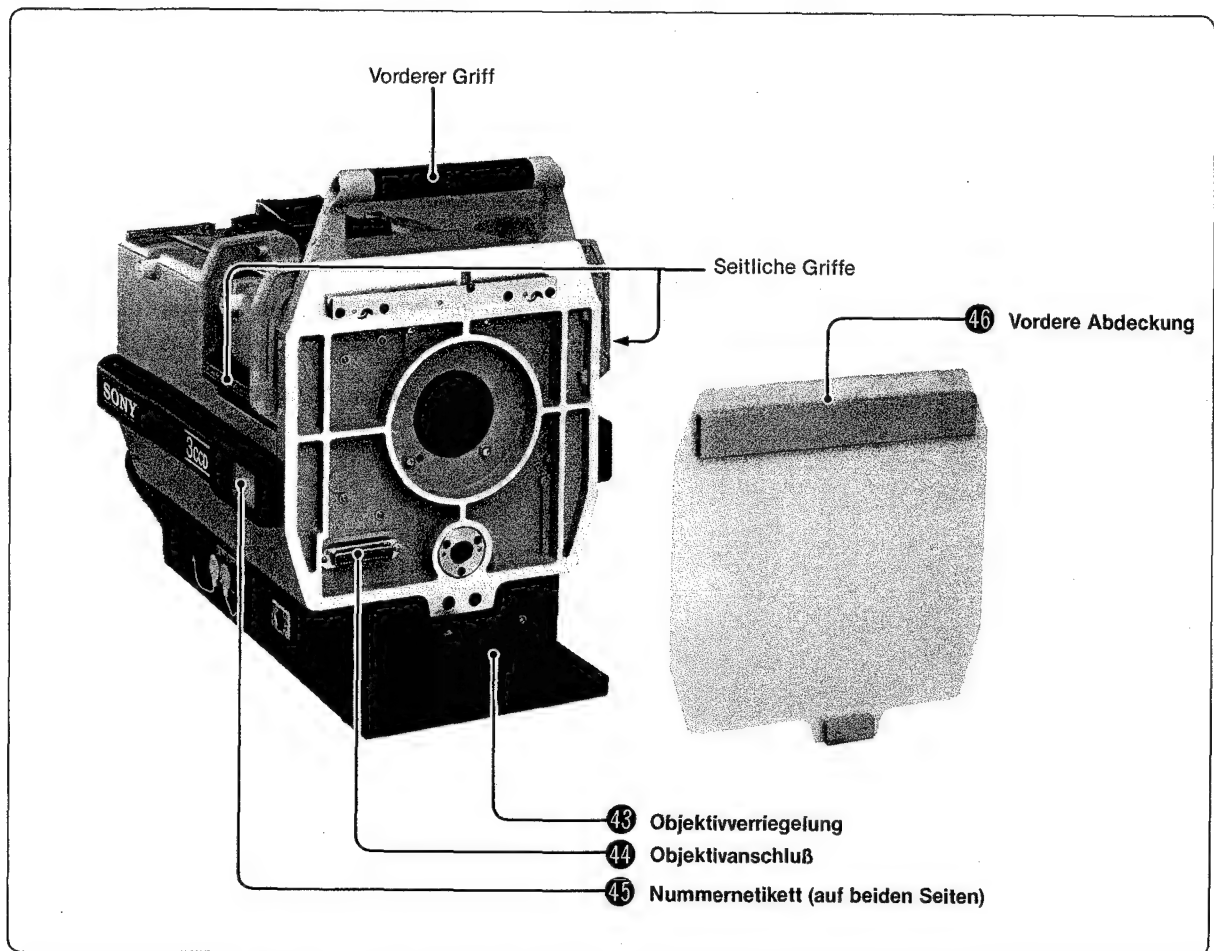
41 VTR-Anschluß (26pol)

Zum Anschluß eines Videorecorders über das CCZ-Q-Verbindungskabel.

42 AC IN-Anschluß

Zum Anschluß des Netzkabels an eine Wandsteckdose (220/240 V) bei Einzelbetrieb.

1-3-3. Vorderseite



43 Objektivverriegelung

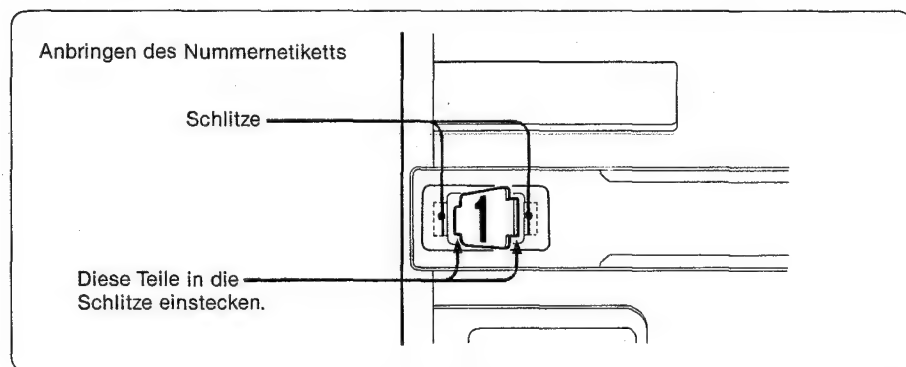
Zum Sichern des Objektivs, nachdem es in den Vorsprung vorne oben am Kamerakopf eingesetzt worden ist.

44 Objektivanschluß (36pol)

Dieser Anschluß ist die Schnittstelle des Objektivs für die Objektiv-Steuersignale. Außerdem ist über diesen Anschluß auch die Stromversorgung des Objektivs möglich. (Über die zur BVP-370P passenden Objektivmodelle erkundigen Sie sich bitte bei Ihrer Sony-Vertretung bzw. beim jeweiligen Objektiv-Hersteller.)

45 Nummernetikett (mitgeliefert)

Die jeweilige Kamera mit dem zugehörigen Nummernetikett versehen.



46 Vordere Abdeckung

Die Abdeckung ist werksseitig auf die Vorderseite des Kamerakopfs aufgesetzt. Die Abnahme dieser Abdeckung ist in Absatz „1-4-2. Anbringen des Objektivs am Kamerakopf“ beschrieben.

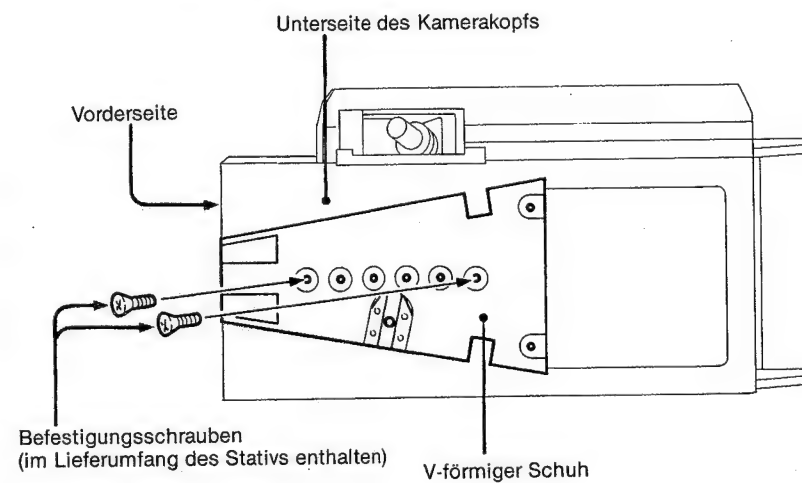
1-4. Aufbau des Systems

1-4-1. Anbringen des Kamerakopfs auf einem Stativ

Vorgehen beim Systemaufbau:

- 1 Den Kamerakopf mit der Seite auf eine stabile Unterlage legen.
- 2 Den V-förmigen Schuh (im Lieferumfang des Stativs enthalten) an der Unterseite des Kamerakopfs anbringen.

Beispiel: Bei Verwendung eines VINTEN-Stativs



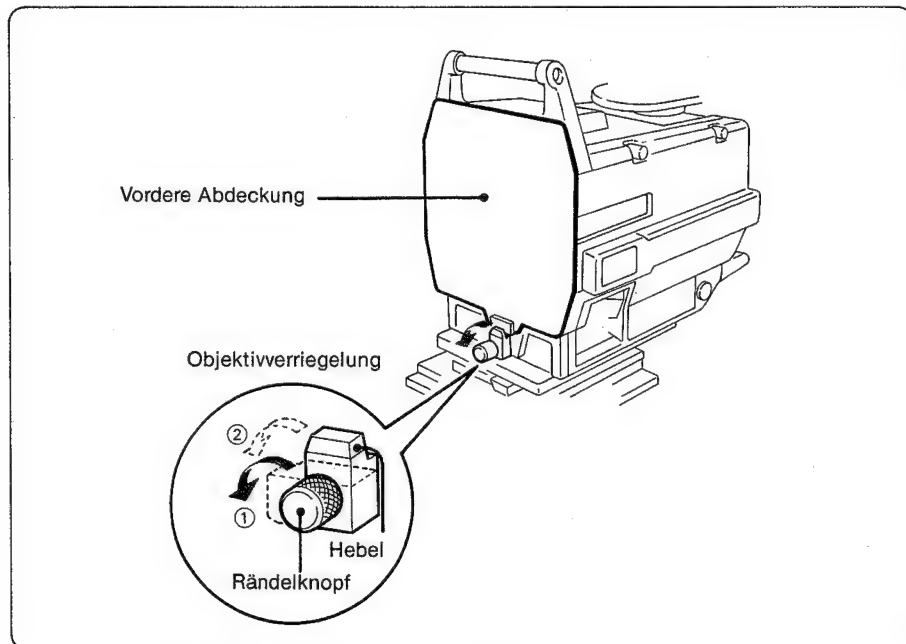
- Bei der Befestigungsposition des Schuhs ist unbedingt auf gute Gewichtsbalance von Kamerakopf und Objektiv zu achten.

- 3 Die Kamera an der Kameraplatte des Stativs befestigen.

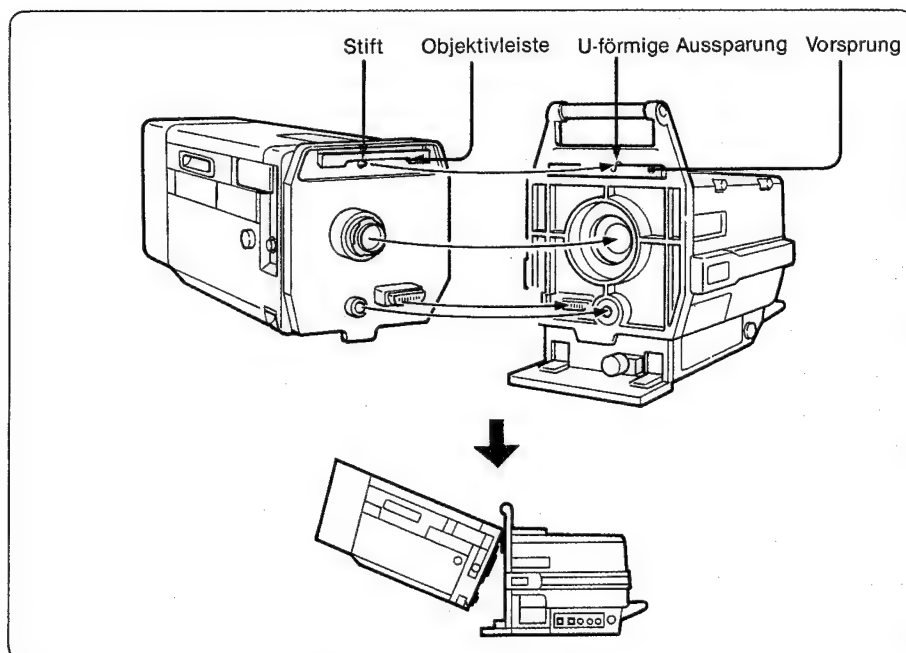
1-4-2. Anbringen des Objektivs am Kamerakopf

Folgendermaßen vorgehen:

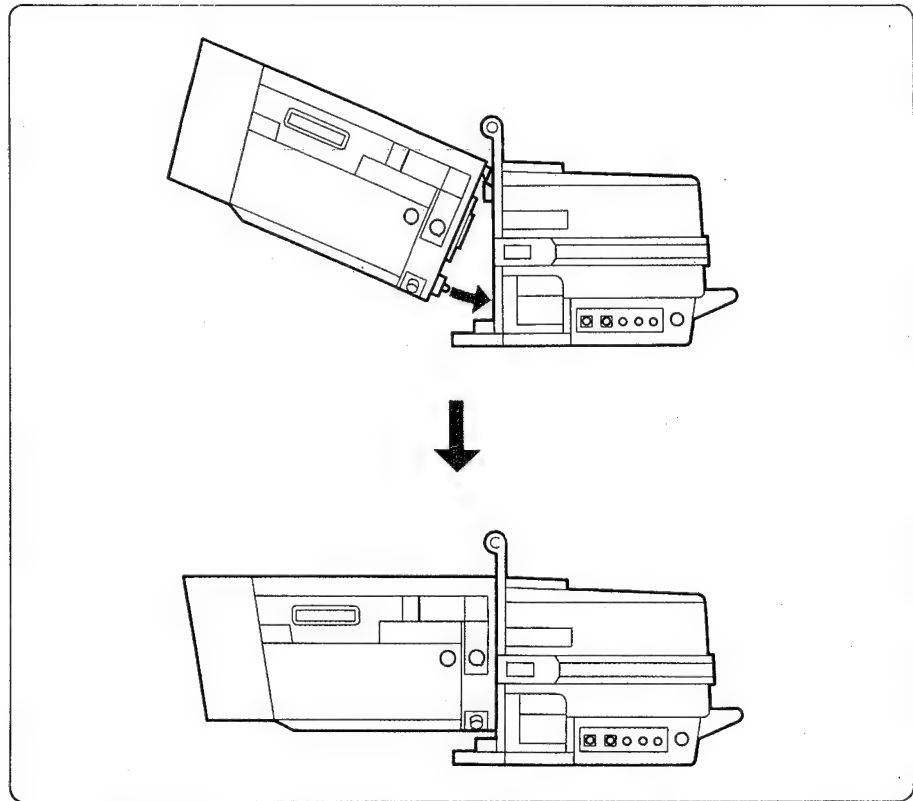
- 1 Den Rändelknopf der Objektivverriegelung vorne unten am Kamerakopf (①) losdrehen und den Hebel gemäß der Abbildung (②) drehen. Danach die vordere Abdeckung abnehmen.



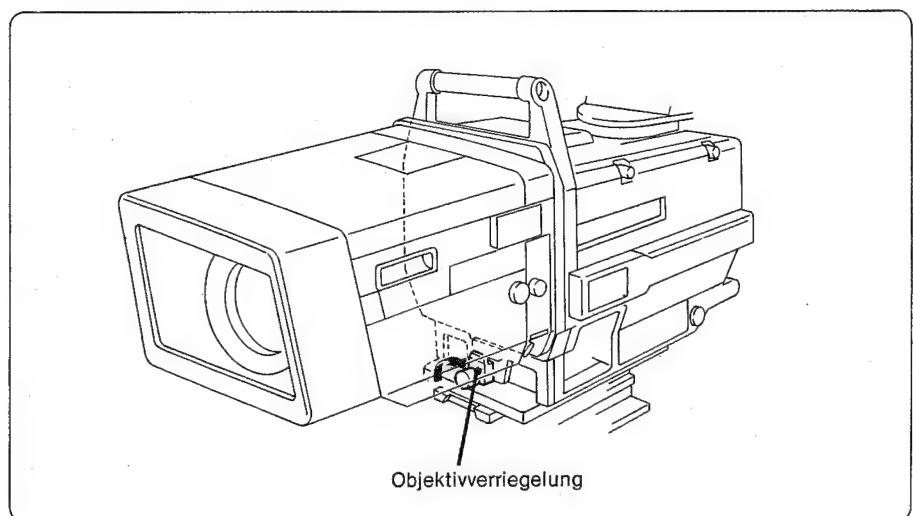
- 2 Den Stift am Objektiv mit der U-förmigen Aussparung am Vorsprung an der oberen Vorderseite des Kamerakopfs fluchten und die Objektivleiste in den Vorsprung des Kamerakopfs einhaken.



- 3** Das Objektiv in den Kamerakopf einrasten.

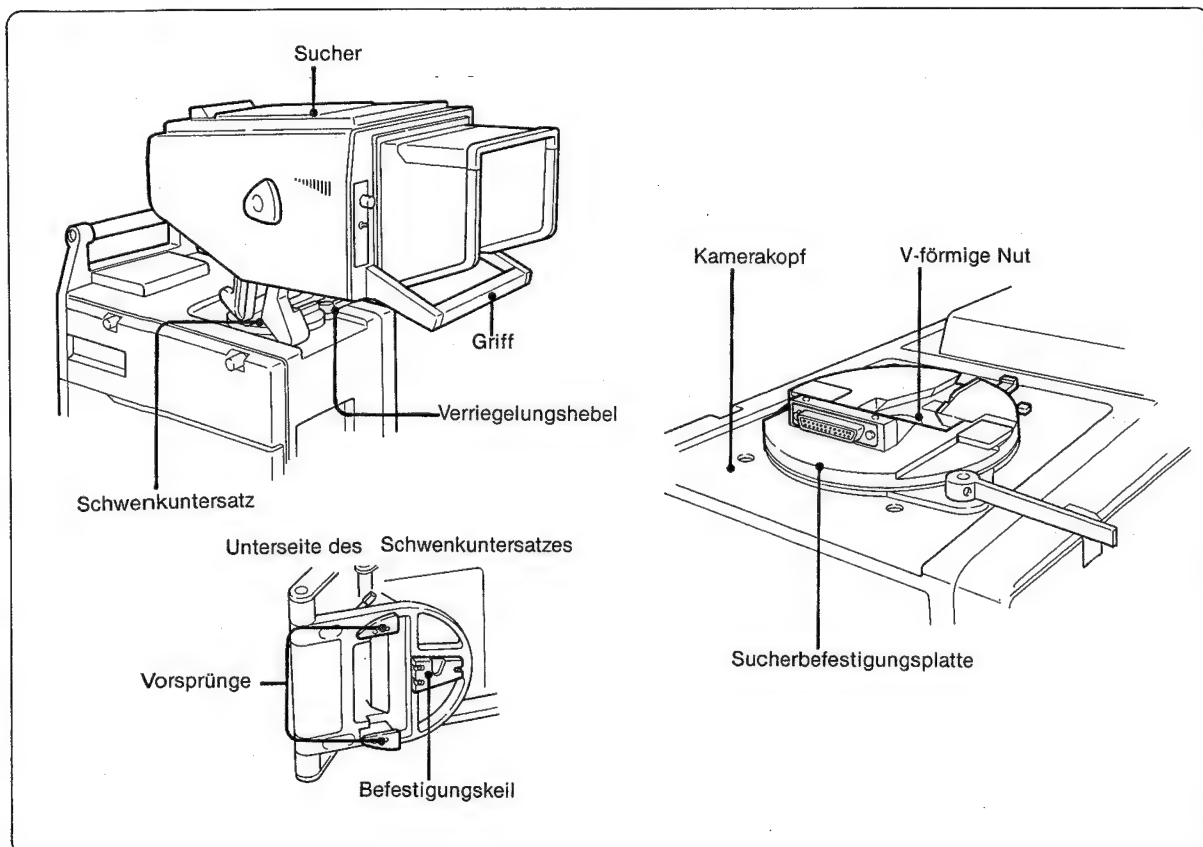


- 4** Den Hebel der Objektivverriegelung wie in der Abbildung gezeigt drehen und anschließend den Rändelknopf im Uhrzeigersinn festdrehen.



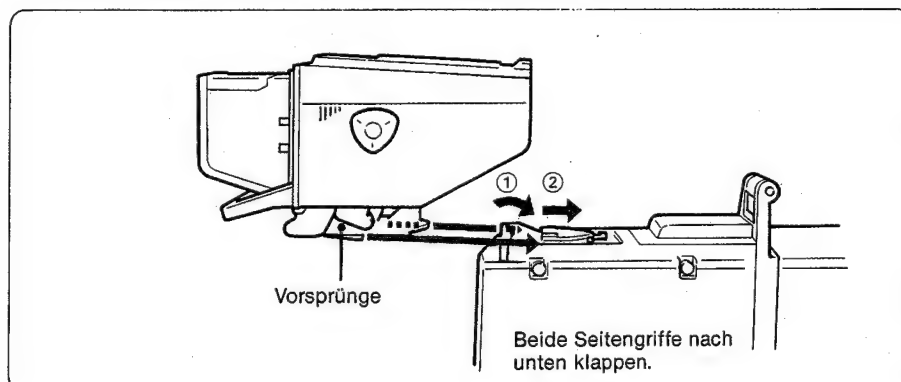
1-4-3. Anbringen des Suchers an der Kamera

Notwendige Teile zum Anbringen des Suchers an der Kamera

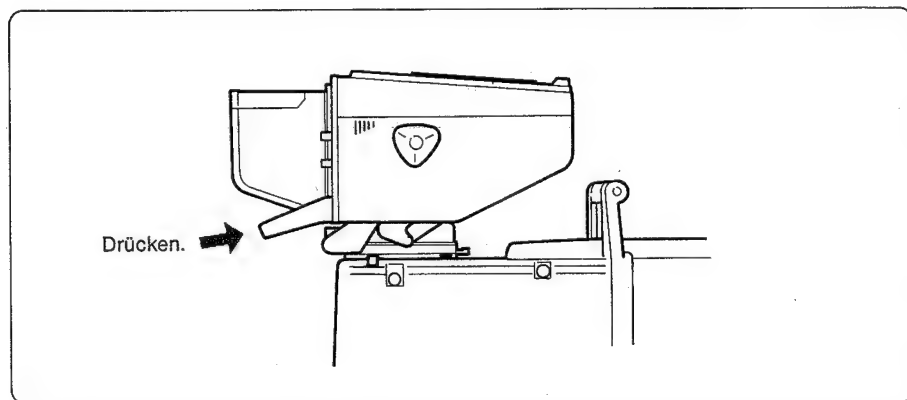


Anbringen des Suchers

- 1 Den Sucher so auf der Sucherbefestigungsplatte an der Kamera positionieren, daß beim Bewegen nach vorne der Befestigungskeil an der Unterseite des Schwenkuntersatzes in die V-förmige Nut der Sucherbefestigungsplatte eingreift. Dadurch werden die Vorsprünge an der Unterseite des Schwenkuntersatzes in die Positionen gebracht, die in der Abbildung gezeigt sind.

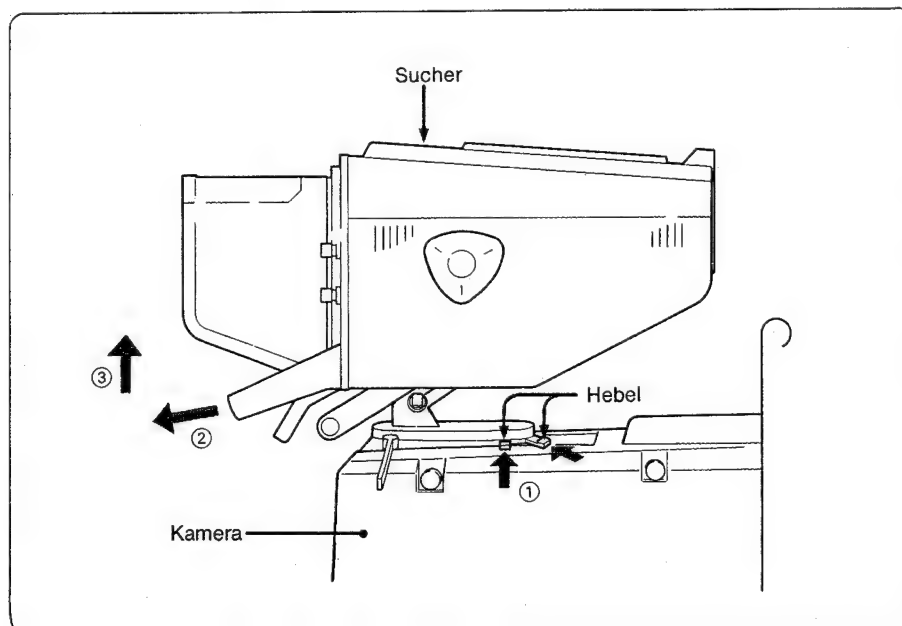


- 2** Den Sucher am Griff so nach vorne drücken, daß der Schwenkuntersatz sicher von der Sucherbefestigungsplatte fixiert wird.



Abnehmen des Suchers

Wie durch die Pfeile 1 gezeigt, gleichzeitig auf die beiden Hebel drücken, dann den Griff zum Körper ziehen (②) und den Sucher nach oben abnehmen.

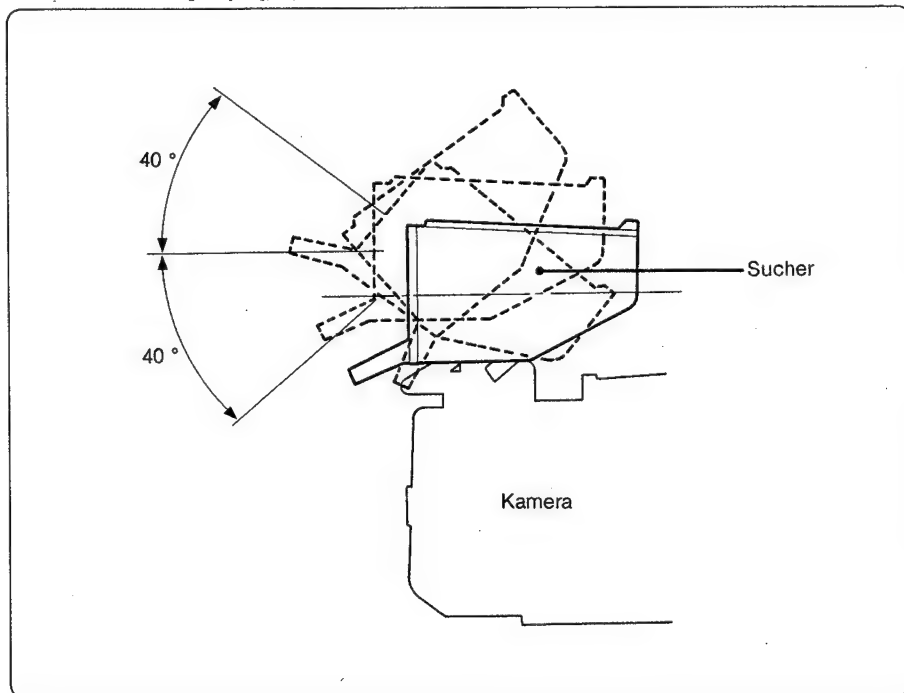


1-5. Winkeleinstellung des Suchers

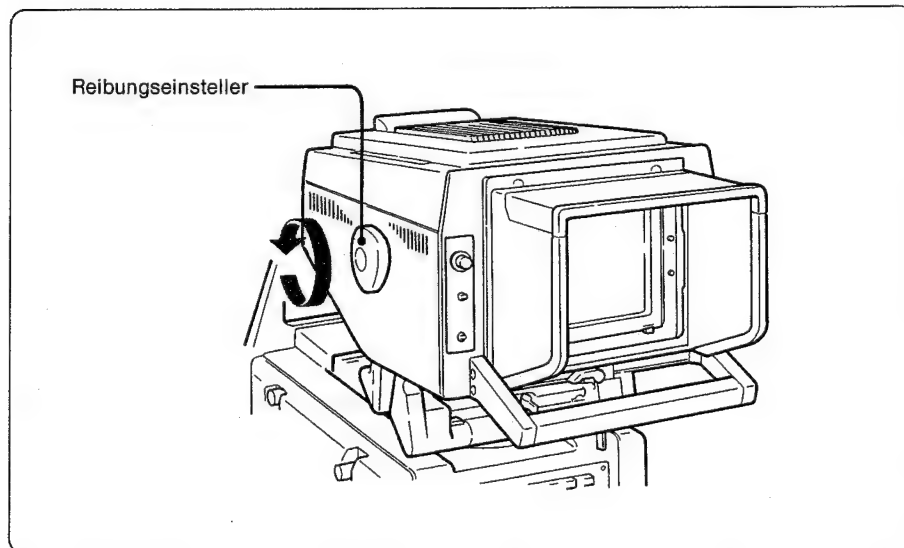
Die Winkelneigung des Suchers läßt sich so einstellen, daß sein Bildschirm mühelos betrachtet werden kann.

Neigen des Suchers

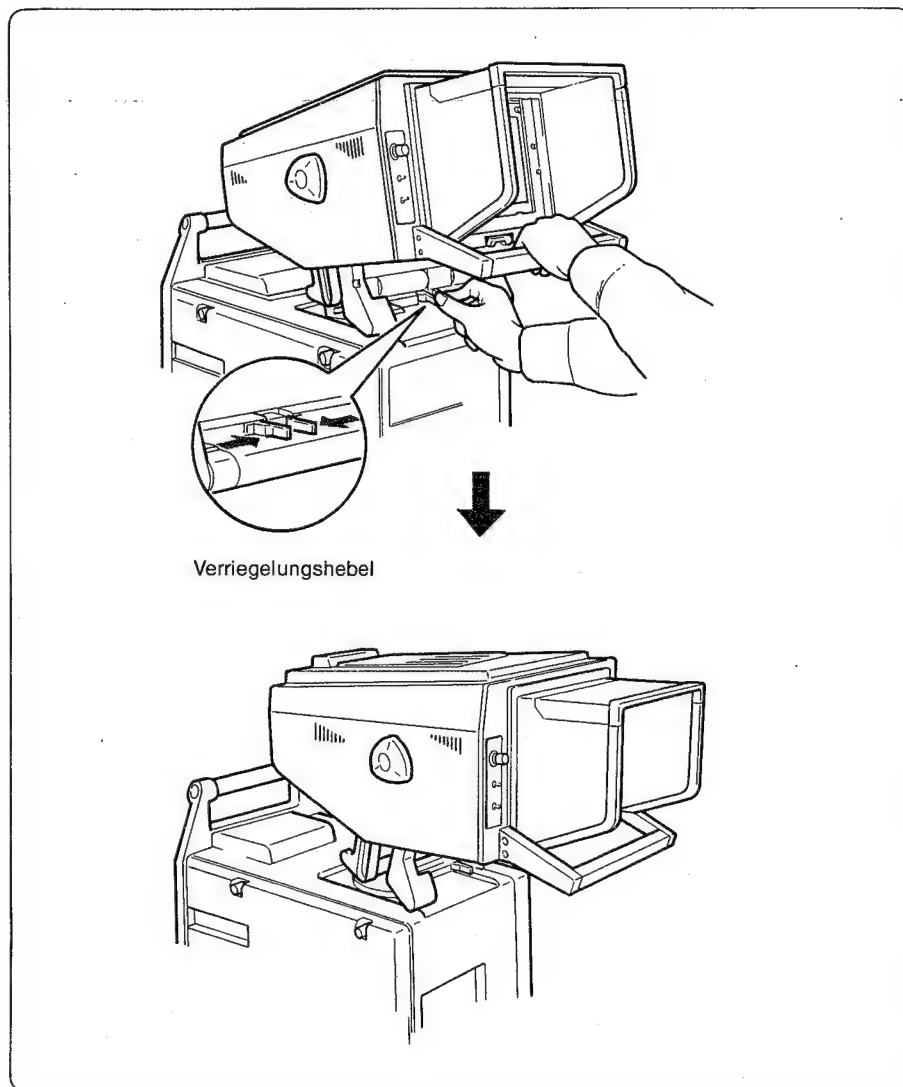
Der Sucher kann jeweils um 40° nach oben oder unten gedreht werden.



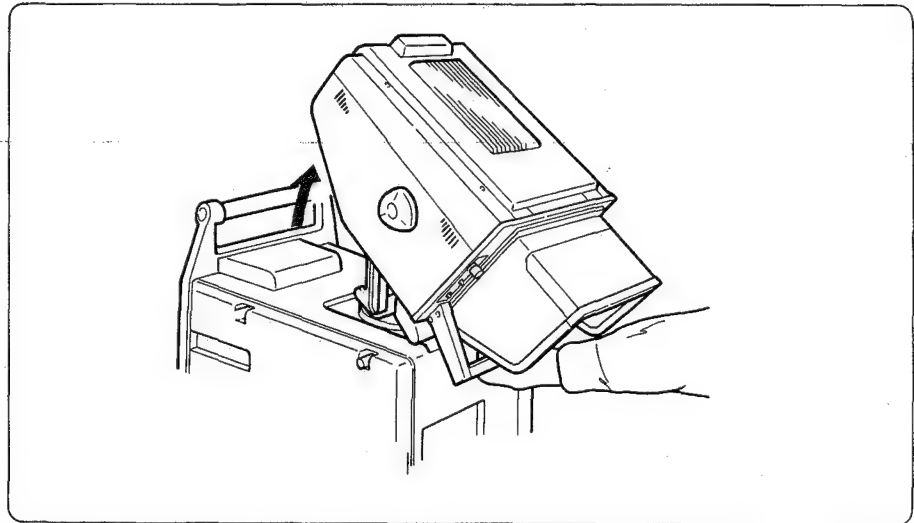
- 1 Die Reibungseinsteller auf beiden Seiten des Suchers geringfügig lösen.



- 2** Die Verriegelungshebel des Suchers zusammendrücken und gleichzeitig den Sucher bis zum oberen Anschlag hochziehen. Der Sucher rastet beim Loslassen der Hebel in dieser Stellung ein.



3 Nun den Neigungswinkel des Suchers nach Wunsch einstellen.



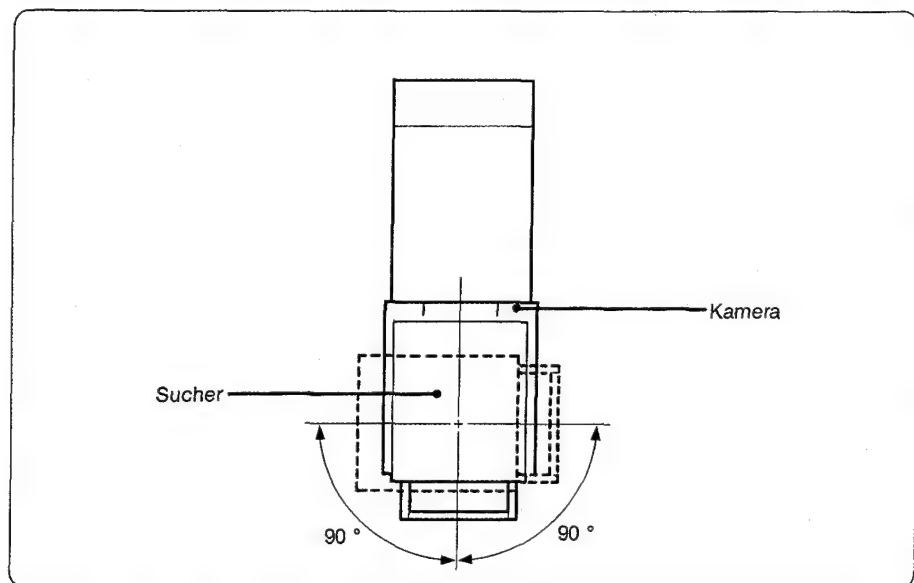
4 Die Reibungseinsteller festdrehen.

Zur Beachtung

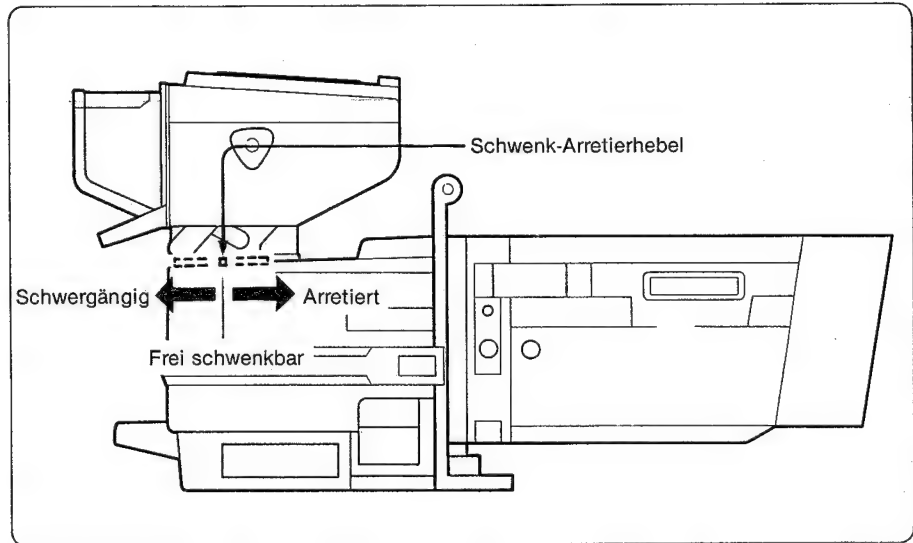
Bringen Sie den Sucher vor einem Transport der Kamera durch Absenken in seine Normalstellung und drehen Sie dann die Reibungseinsteller fest.

Schwenken des Suchers

Der Sucher kann jeweils um 90 ° nach links oder rechts gedreht werden.



Der Schwenk-Arretierhebel bewirkt folgendes: in der hinteren Position läßt sich der Sucher schwergängig gegen einen Reibungswiderstand drehen; in der mittleren Position ist der Sucher frei schwenkbar und in der vorderen Position arretiert.



Schwergängiger Sucherschwenk (Reibungswiderstand)

In dieser Hebelstellung bewegt sich der Sucher nur schwergängig nach links oder rechts, auch wenn die Kamera bei der Aufnahme bewegt wird.

Der Sucher kann jedoch auch in diesem Fall mit einem etwas größeren Kraftaufwand als bei der frei schwenkbaren Position um 90 ° nach beiden Seiten geschwenkt werden.

Freier Sucherschwenk

Der Sucher kann sehr leicht um 90 ° nach beiden Seiten geschwenkt werden.

Arretierposition des Suchers

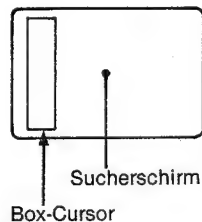
Der Sucher ist in seiner Stellung fixiert, kann jedoch geringfügig bewegt werden.

1-6. Anzeigen im Sucher

1-6-1. Eingblendete Markierungen

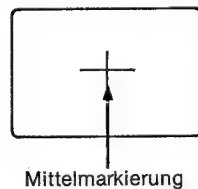
Durch Betätigung der dafür vorgesehenen Bedienelemente lassen sich Box-Cursor, Mittelmarkierung, Sicherheitszone und Zoompositionsmarkierung auf dem Sucherschirm bringen.

Box-Cursor



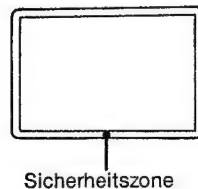
Der Box-Cursor erscheint beim Drücken der CURSOR-Taste auf dem Sucherschirm. Bei erneutem Tastendruck verschwindet er wieder.

Mittelmarkierung



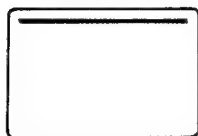
Steht der CENTER MARKER-Schalter auf ON, so wird in die Suchermitte ein weißes Kreuz eingeblendet, das bei Schalterstellung OFF nicht zu sehen ist. Einzelheiten hierzu entnehmen Sie bitte Teil 2 und den folgenden Abschnitten.

Sicherheitszone



Steht der SAFETY ZONE-Schalter auf ON, so wird auf dem Sucherschirm ein Rahmen (als Markierung der Sicherheitszone) eingeblendet, dessen Fläche 90% des Aufnahmebilds umfaßt. In Schalterstellung OFF ist dieser Rahmen nicht sichtbar. Mit einem internen Schalter läßt sich die Sicherheitszone bis auf 80% steigern. (Einzelheiten hierzu entnehmen Sie bitte Teil 2 und den folgenden Abschnitten.)

Markierung der Zoomposition



Durch entsprechende Betätigung eines internen Schalters kann die Zoomposition auf dem Sucherschirm markiert werden. Einzelheiten hierzu entnehmen Sie bitte Teil 2 und den folgenden Abschnitten.

1-6-2. Textanzeigen auf dem Sucherschirm

Die BVP-370P kann auf dem Sucherschirm Textanzeigen darstellen, die unter die beiden Gruppen Status- und Warnanzeigen fallen.

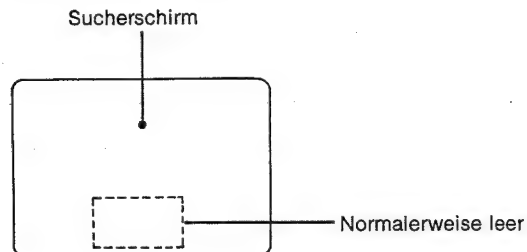
Statusanzeigen

Anhand der Statusanzeigen kann der Kameramann die Einstellungen von Bedienelementen, Parametern und Resultaten der Automateinstellungen und den Betriebszustand von Platinen überprüfen und bestätigen. Die Statusinformationen verteilen sich auf fünf „Seiten“, die mit Hilfe des DISPLAY-Schalters an der Rückseite umgeschaltet werden können. In Schalterstellung ON ist die Kamera zur Anzeige von Statusinformationen auf Seite 1 bereit, die normalerweise leer ist. Sobald sich jedoch der Setzzustand eines Bedienelements ändert oder eine automatische Setup-Operation abläuft, so erscheint die neue Einstellung bzw. der Parameter und das Resultat der Automateinstellung in Textform auf Seite 1. In Schalterstellung ON läßt sich der Seiteninhalt durch Drücken des Schalters nach oben in Stellung PAGE ändern. Bei jeder derartigen Schalterbetätigung wird die Seitenzahl in folgender Weise weitergeschaltet:

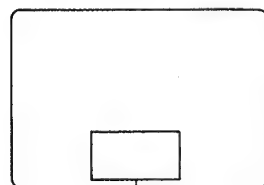
→ (Seite) 2 → 3 → 4 → 5 → 1

Die Seitengliederung ist im einzelnen wie folgt:

Statusanzeige, Seite 1



Wenn sich der Status des Kamerasystems z.B. in Bezug auf die Einstellung von Bedienelementen oder Filterwahl ändert, oder wenn eine automatische Operation ausgeführt wird, erscheinen auf dem Sucherbildschirm entsprechende Meldungen. Die Anzeige der neuen Einstellung oder Filterwahl bzw. des Parameters und des Resultats der Einstellung erlischt nach etwa drei Sekunden.



- Bei Ein-/Ausschalten des Farbbalkenmusters:

BARS: ☐ ON oder OFF

- Bei Änderung des Hauptverstärkungsgrads:

GAIN: ☐ DB
0, 3, 6, 9 oder 18

- Bei Änderung der Verschlusszeit:

SHUTTER:
1/ ☐ 60, 125, 250, 500, 1000, 2000 oder ECS

- Bei Filterwechsel:

CC: ☐ **ND:** ☐ A, B, C oder D
1, 2, 3 oder 4
Oder **CLS** (Blende geschlossen)

- Bei Ausführung einer automatischen Setup-Operation:

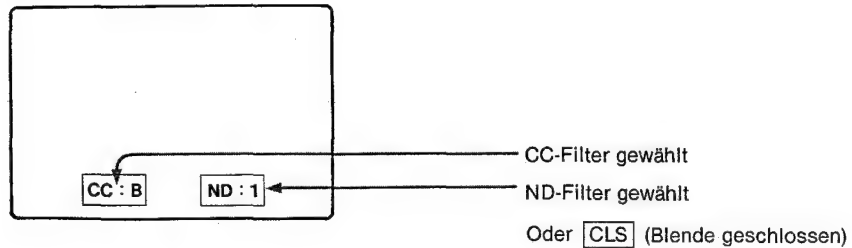
Parameter und Ergebnis der Einstellung

(Sehen Sie hierzu bitte „1-6-3. Textmeldungen bei automatischer Setup-Operation“.)

Statusanzeige, Seite 2

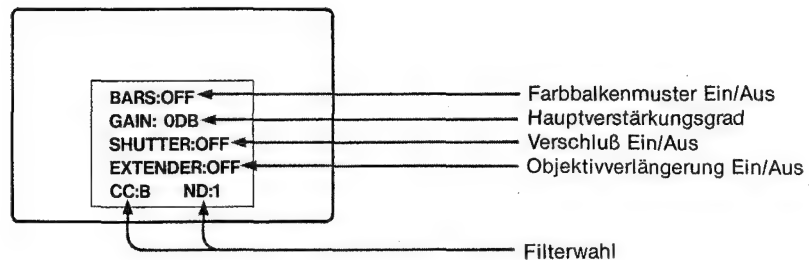
Die aktuellen Vorgabewerte für ND- und Farbkonversionsfilter werden angezeigt.

(Beispiel)

**Statusanzeige, Seite 3**

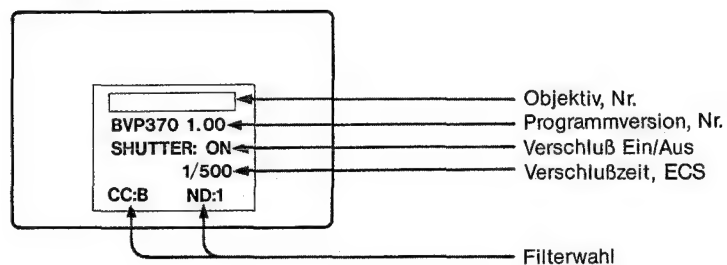
Der aktuelle Status in bezug auf Einschaltzustand des Farbbalkenmusters, Hauptverstärkungsgrad, Einschaltzustand des Verschlusses und der Objektivverlängerung sowie die Filterwahl werden angezeigt.

(Beispiel)

**Statusanzeige, Seite 4**

Nummer von Objektiv und Programmversion, Verschlußzustand, Verschlußzeit und Filterwahl werden angezeigt.

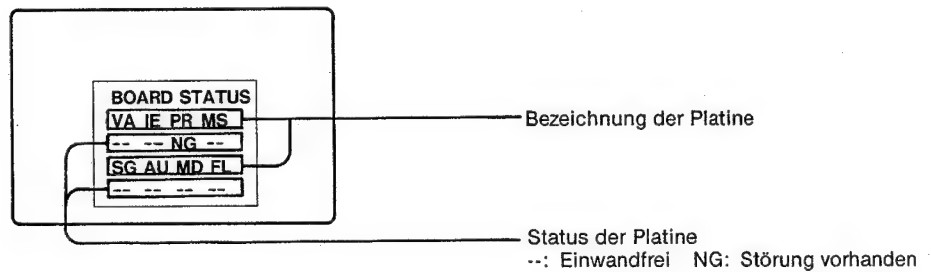
(Beispiel)



Statusanzeige, Seite 5

Der Status der einzelnen Platinen im Kamerainneren wird durch eine Eigenprüfung festgestellt und dann auf dem Sucherschirm angezeigt.

(Beispiel)



Warnanzeigen

Falls in der Datenübertragungsleitung zwischen Kamera und Kamera-Steuereinheit eine Störung auftritt, erscheint unabhängig von der Stellung des DISPLAY-Schalters eine Warnmeldung bzw. das Ergebnis der Eigenprüfung auf dem Sucherschirm.

NO CCU DATA

Diese Meldung blinkt, wenn die Übertragung serieller Daten von der Kamera-Steuereinheit zur Kamera ausgesetzt hat.

FRAMING ERR

PARITY ERR

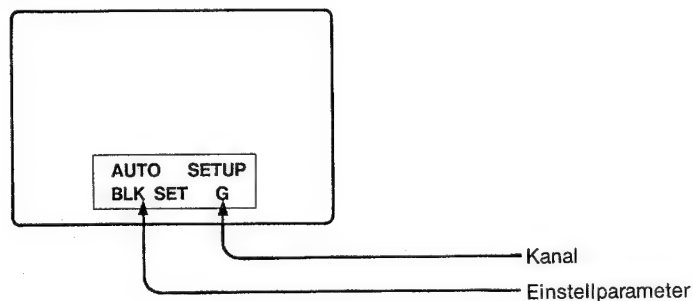
Je nach Art des Fehlers erscheint eine dieser beiden Meldungen blinkend auf dem Sucherschirm, wenn bei den seriellen Daten von der Kamera-Steuereinheit ein Fehler festgestellt worden ist.

1-6-3. Textmeldungen bei automatischer Setup-Operation

Anzeigen während der automatischen Setup-Einstellung

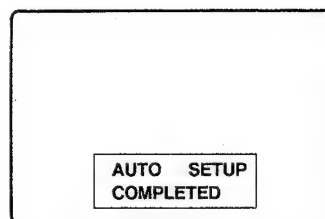
Wird eine automatische Setup-Operation ausgeführt, wenn die Kamera zur Anzeige von Seite 1 bereit ist, so werden in Textform u.a. der Einstellparameter und der von der Einstellung betroffene Kanal angezeigt.

(Beispiel)



Anzeige über Abschluß der Einstellung

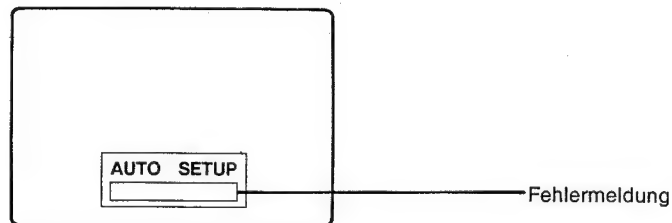
Sobald die automatische Setup-Einstellung abgeschlossen ist, erscheint folgende Anzeige auf dem Sucherschirm:



Fehlermeldungen bei Einstellung

Wird während einer automatische Setup-Einstellung ein Fehler festgestellt, so erscheint eine entsprechende Meldung gemäß der nachfolgenden Tabelle.

(Beispiel)

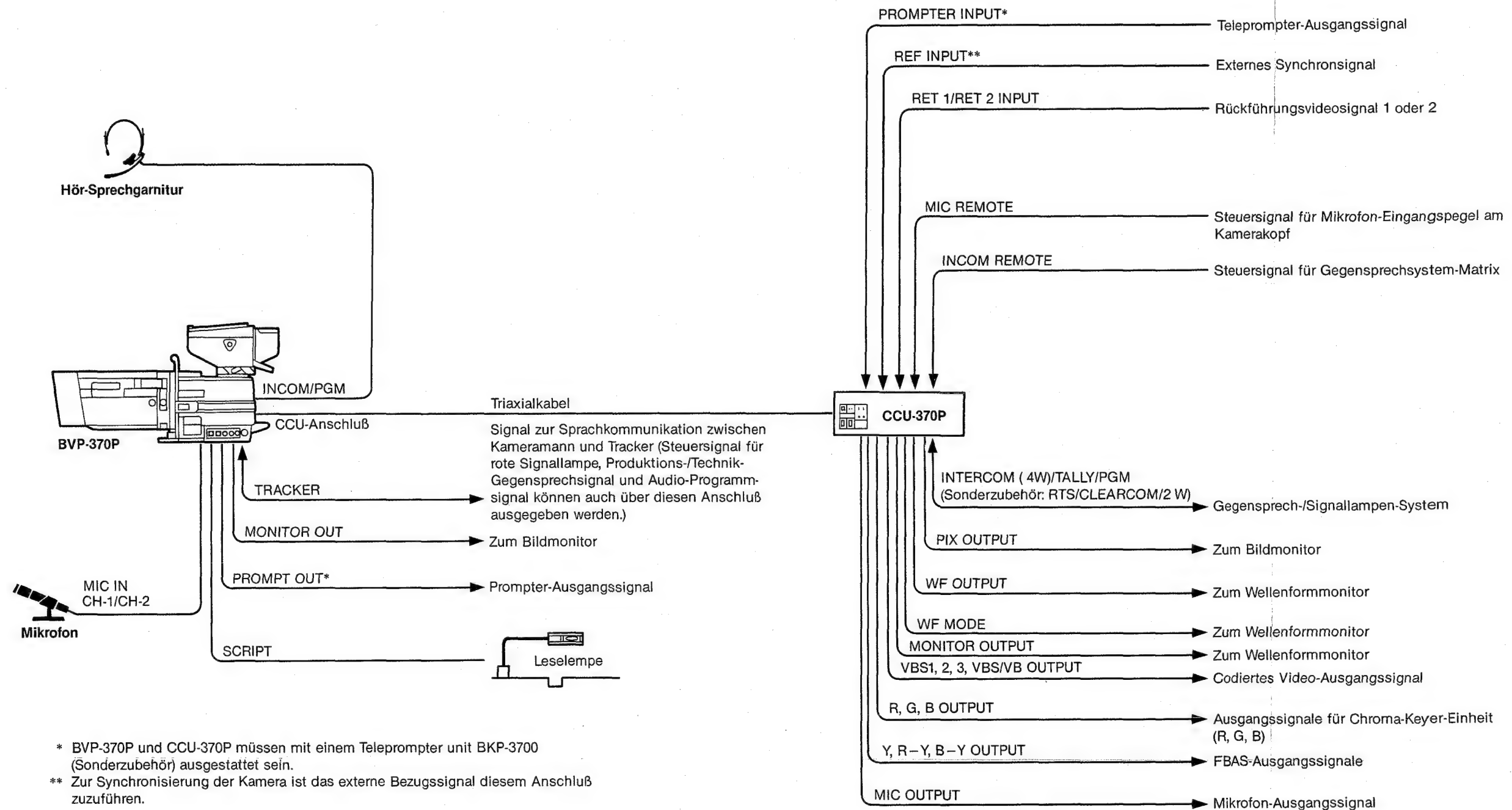


- Auf dem Sucherschirm der BVP-370P können folgende drei Fehlermeldungen angezeigt werden:

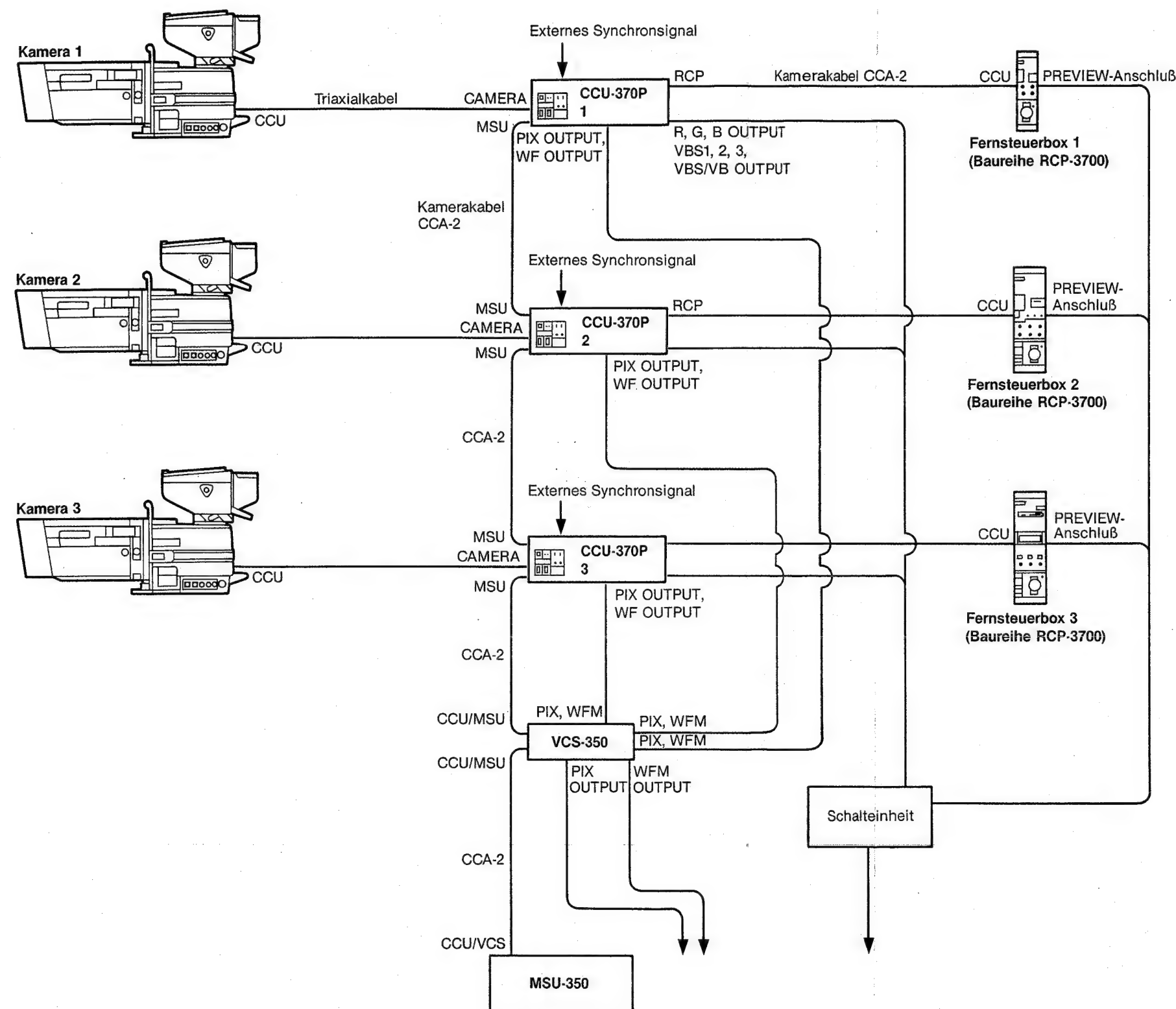
Fehlermeldung	Bedeutung
– OVER FLOW –	Der Unterschied zwischen aktuellem Wert und Bezugswert ist so groß, daß der für automatische Einstellungen mögliche Bereich überschritten ist.
– TIME LIMIT –	Einstellung innerhalb des vorgegebenen Zeitrahmens unmöglich.
– LOW LEVEL –	Videoausgangspegel zu niedrig für eine zufriedenstellende Einstellung. Beleuchtungsstärke erhöhen oder höheren Hauptverstärkungsgrad einstellen.

1-7. Systemverkabelung

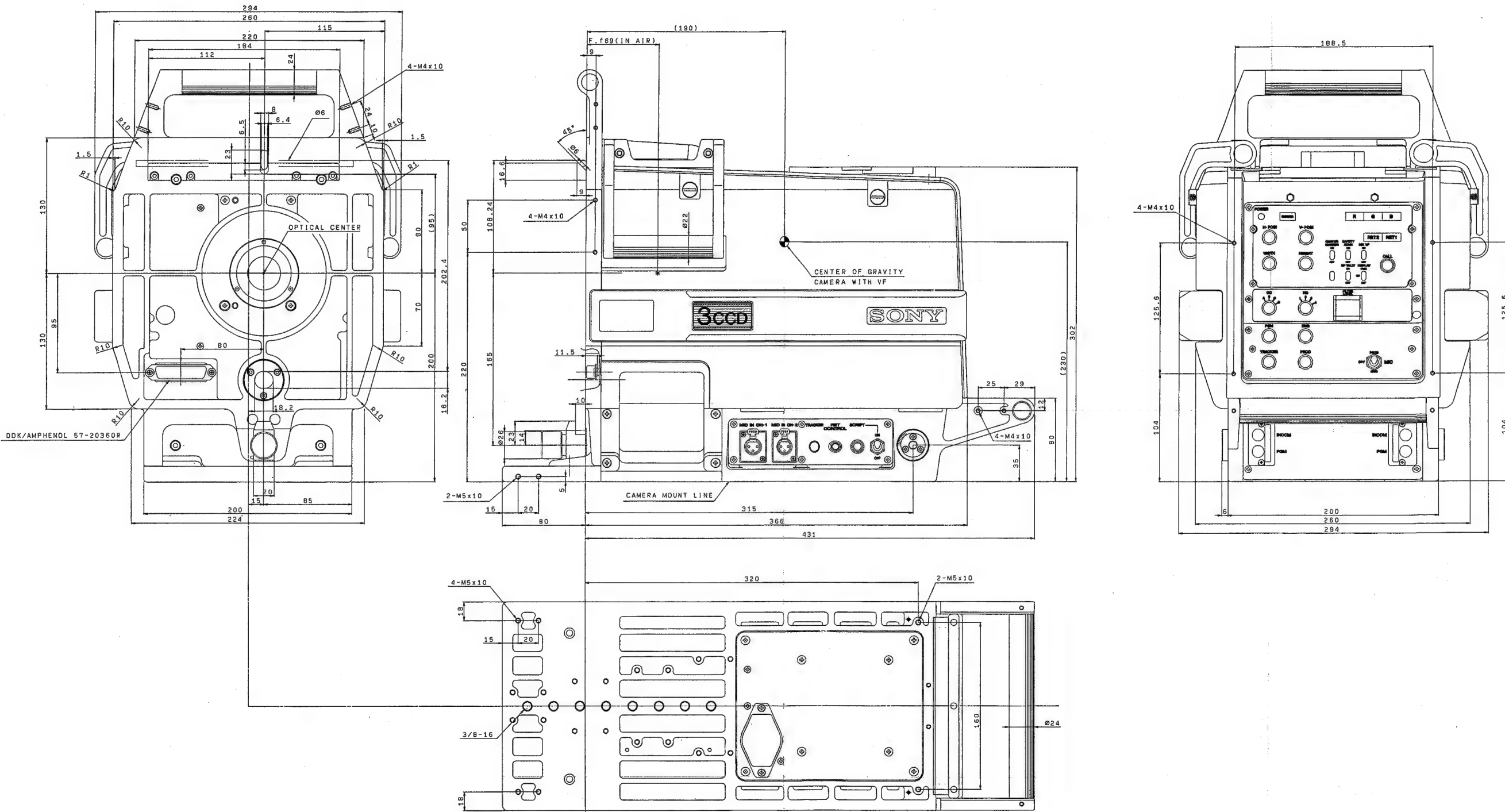
1-7-1. Betrieb einer Kamera zusammen mit der Kamera-Steuereinheit CCU-370P



1-7-2. Betrieb mehrerer Kameras



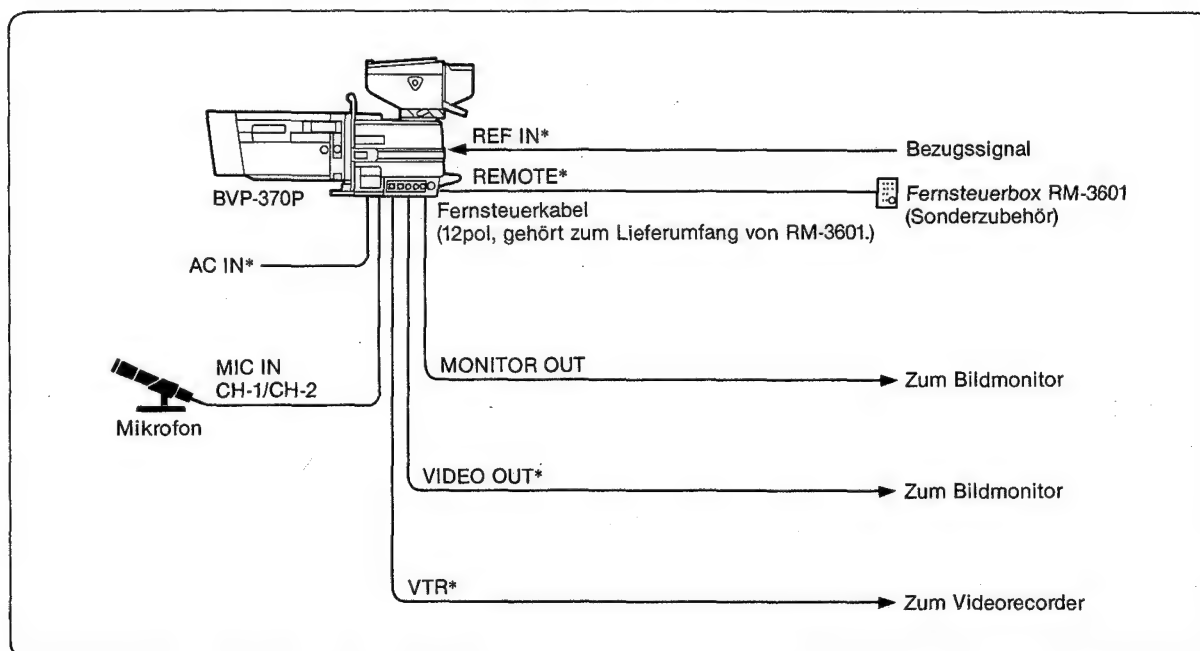
BVP-370P



1-7-3. Einzelbetrieb der Kamera

Zum Einzelbetrieb der Kamera BVP-370P ist der Einzelbetrieb-Adaptersatz BKP-370P erforderlich.

Die BVP-370P kann zusammen mit der Fernsteuerbox RM-3601 betrieben werden, wenn eine Modifikation im Kamerakopf vorgenommen wird. Ihre Sony-Vertretung gibt Ihnen hierzu gerne ausführliche Auskunft.



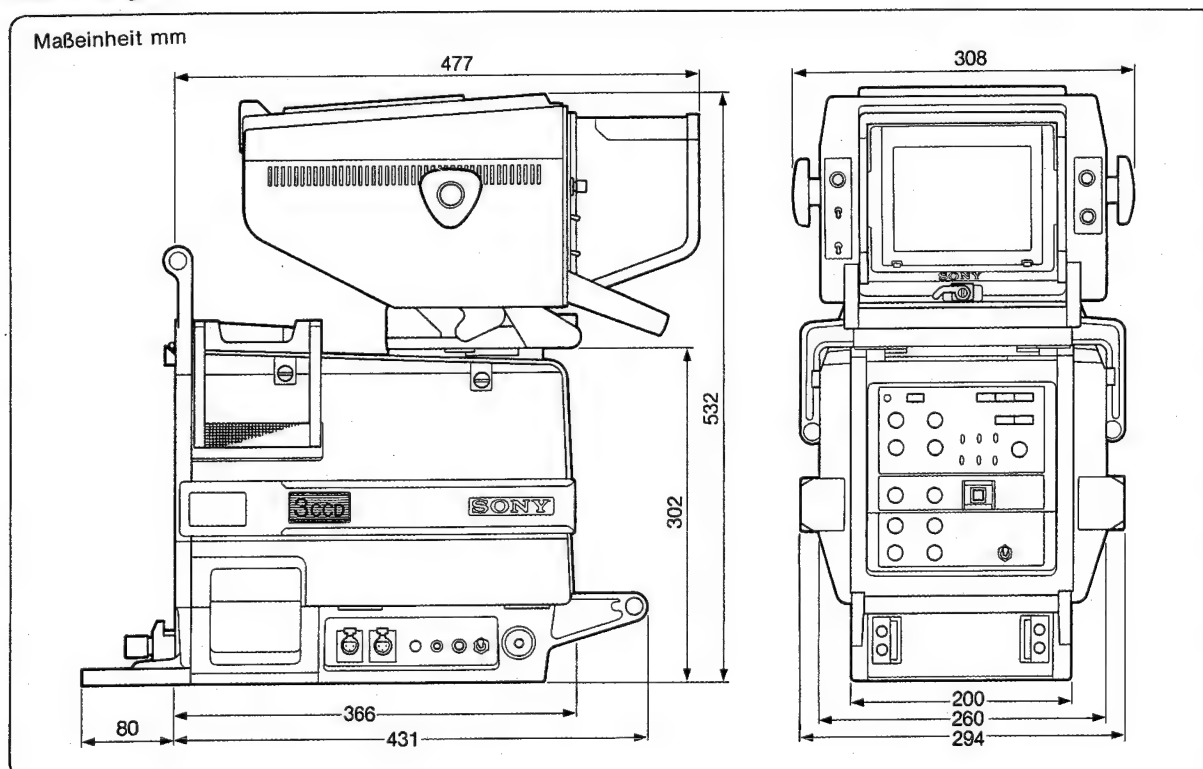
* Anschluß an Einzelbetrieb-Adaptersatz BKP-370P

1-8. Technische Daten

Allgemeines

Bildwandler	2/3-Zoll-FIT-CCD-Sensor (Frame Interline Transfer Charge Coupled Device)
Konfiguration	RGB, 3 CCDs
Bildelemente	752(h) × 582(v)
Spektralsystem	F1,4, Prismensystem
Eingebaute Filter	Konversionsfilter A: Kreuzfilter B: 3200 K C: 4300 K D: 6300 K ND-Filter 1: Klar 2: 1/4 ND 3: 1/8 ND 4: 1/16 ND
Empfindlichkeit	2000 Lux (F8 typisch) 89,9% Reflexion
Mindestbeleuchtung	ca. 7,5 Lux (F1,4, bei einer Pegelanhebung von 18 dB)
Video-Signal-Rausch- abstand	60 dB (typisch)
Horizontalauflösung	700 Zeilen (in der Mitte)
Farbdeckung	max. 0,05% über den gesamten Bildschirm (ohne Objektiv)
Geometrische Verzeichnungen	keine
Betriebstemperatur	– 20 °C bis +45 °C
Gewicht	ca. 20 kg (ohne Sucher)

Abmessungen



Ein- und Ausgangsanschlüsse

CCU	Fischer-Triaxial-Anschluß (1)
Objektiv-Anschluß	36pol, (1)
Sucherbuchse	25pol (1)
MONITOR OUT	BNC (1) 1,0 Vss, 75 Ω
PROMPT OUT*	BNC (1) 1,0 Vss, 75 Ω
REF IN*	BNC (1) 1,0 Vss, 75 Ω
VIDEO OUT**	BNC (1) FBAS: 1,0 Vss
VTR**	26pol
AC OUT	3pol
AC IN**	3pol
TRACKER	10pol (1)
RET CONTROL	6pol (1)
SCRIPT	4pol (1) max. 5 W, 12 V Gleichsspannung
INCOM/PGM	Doppelbuchsen (2)
MIC IN CH-1, CH-2	XLR, 3pol (jeweils 1) -60 dB

* Teleprompter-Adaptersatz BKP-3700 ist erforderlich.

** Nur bei Verwendung von Einzelbetrieb-Adaptersatz
BKP-370P.

Zubehör

Erweiterungskarte A (1)
Steckverbinder für TRACKER-Anschluß (10pol) (1)
Steckverbinder für RET CONTROL-Anschluß (6pol) (1)
Steckverbinder für SCRIPT-Anschluß (4pol) (1)
Rote Signallampe (2)
Sicherung (6.3A) (1)
Sicherung (4 A) (3)
Sicherung (630mA) (1)
Metall-Befestigungsteile (2)
Vordere Abdeckung (1)
Kamera-Nummernetikett (2 Sätze)
Bedienungs- und Wartungsanleitung (1)

Sonderzubehör

Teleprompter-Adaptersatz BKP-3700
Kontrastregeleinheit BKP-3701
7-Zoll- Monochrom-Sucher BVF-77CE
7-Zoll- Farbsucher BVF- 7700P
Monitorblendschutz VFH-770(für BVF-77CE/7700P bei Verwendung im Freien)
Skripthalter BKP-3613/3614 (mit Leselampe)
Einzelbetrieb-Adaptersatz BKP-370P

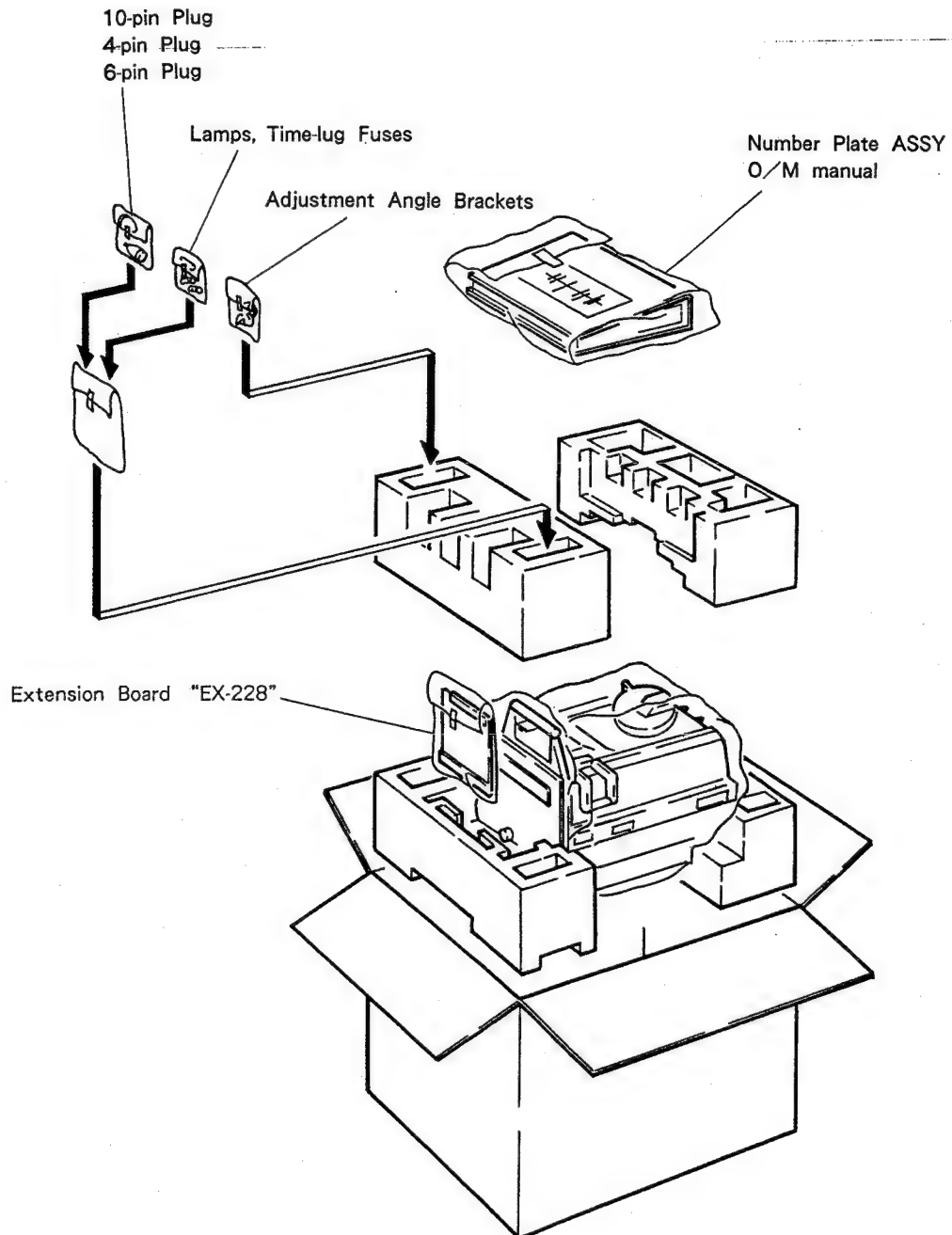
Empfohlene Komponenten

Kamera-Steuereinheit CCU-370P
Fernsteuerbox RCP-3710/3711/3720/3721/3730/3731
Master-Setup-Einheit MSU-350
Video-Selector VCS-350
Fernsteuerbox RM-3601

Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

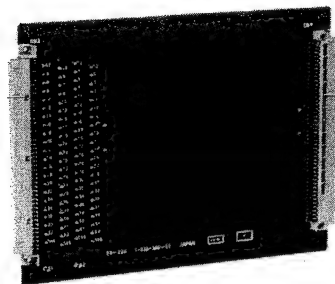
SECTION 2 INSTALLATION

2-1. PACKING AND UNPACKING

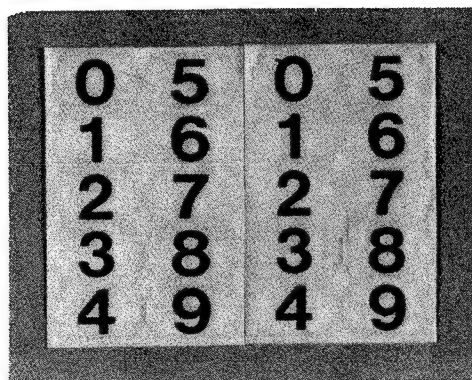


2-2. SUPPLIED ACCESSORIES

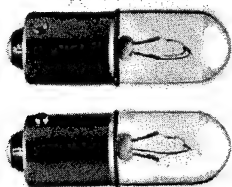
Extension Board "EX-228": 1



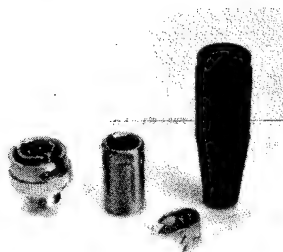
Number Plate ASSY: 1



Tally Lamps: 2



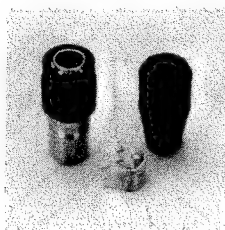
10-pin Plug: 1



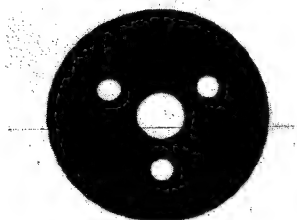
4-pin Plug: 1



6-pin Plug: 1



Adjustment Angle Brackets: 2



Time-lug Fuses: 5

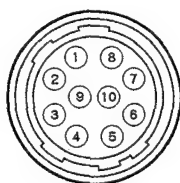
Operation and Maintenance Manual:1

2-3. CONNECTORS AND CABLES

2-3-1. Connector Input and Output Signals

Main connector input and output signals are shown below.

TRACKER (10P, FEMALE)



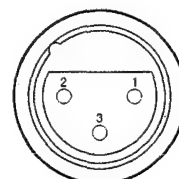
No.	SIGNAL	SPECIFICATION
1	TRACKER R OUT(X)	TRACKER RECEIVE 0dBs. UNBALANCED
2	NC	
3	TRACKER R OUT(G)	GND for TRACKER R
4	TRACKER PGM OUT(X)	- 20dBs. UNBALANCED
5	+12V(T)OUT	+12Vdc. 100mA(MAX)
6	TRACKER PGM OUT(G)	GND for TRACKER PGM
7	TRACKER T IN(X)	TRACKER TALK 0dBs/ - 20dBs High impedance BALANCED
8	TRACKER T IN(Y)	
9	UP TALLY OUT(G)	+12Vdc 200mA(MAX)
10	UP TALLY OUT(X)	

SCRIPT (4P, FEMALE)



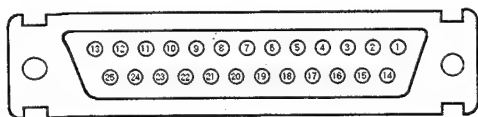
No.	SIGNAL	SPECIFICATION
1	GND	GND for POWER
2	NC	Non connection
3	NC	Non connection
4	+12V OUT	+12Vdc. 400mA(MAX)

MIC IN CH-1, CH-2 (3P, FEMALE)



No.	SIGNAL	SPECIFICATION
1	MIC IN(G)	- 60dBs
2	MIC IN(X)	High impedance
3	MIC IN(Y)	BALANCED

VF (25P, FEMALE)

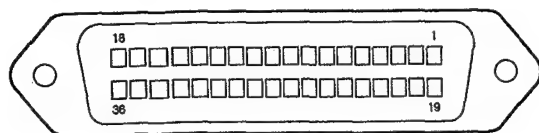


No.	SIGNAL	SPECIFICATION
1	VF R VIDEO OUT(X)	* V=714mVp-p(NTSC) V=700mVp-p(PAL) Zo=75 Ω ± 5%POS
14	VF R VIDEO OUT (R)	GND for VF R VIDEO
2	NC	Non connection
15	NC	Non connection
3	VF G OUT(X)	B/W:Y/RET, COLOR:G/RET Zo=75 Ω ± 5% 1Vp-p
16	VF G VIDEO OUT(G)	GND for VF G VIDEO
4	NC	Non connection
17	CHASSIS GND	CHASSIS GND
5	VF B VIDEO OUT(X)	* V=700mV ± 2%(100%) Zo=75 Ω ± 5%
18	VF B VIDEO OUT (G)	GND for VF B VIDEO
6	RET ON OUT	* ON:0+0.5V OFF:High impedance OPEN COLLECTOR
19	VF DC GND	GND for +12V(VF)
7	+12V (VF)OUT	+12Vdc(at 4A)
20	VF DC GND	GND for +12V(VF)
8	+12V(VF)OUT	+12Vdc (at 4A)
21	TALLY GND	GND for TALLY

No.	SIGNAL	SPECIFICATION
9	UP TALLY ON OUT	ON:+12V OFF:High impedance OPEN COLLECTOR
22	VF RETURN VIDEO OUT(G)	GND for VF RETURN VIDEO
10	VF RETURN VIDEO OUT(X)	* V=1.0Vp-p ± 2%(100%) Zo=75 Ω ± 5%
23	G TALLY ON OUT	ON: 5V ± 0.5V (ZR=300 Ω) OFF:0+0.5V
11	R TALLY ON OUT	ON: 5V ± 0.5V (ZR=300 Ω) OFF:0+0.5V
24	NC	Non connection
12	VF SEL COL/BW IN	
25	NC	Non connection
13	NC	Non connection

* This signals is output only when the switch S6 (VF SELECT)/MS-33 board [PANEL] is set to "COLOR"


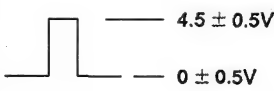
LENS (36P, FEMALE)



(EXT VIEW)

No.	SIGNAL	SPECIFICATION
1	NC	Non connection
19	NC	Non connection
2	NC	Non connection
20	NC	Non connection
3	NC	Non connection
21	LENS R TALLY ON OUT	ON:L OFF:H Zo=1k Ω
4	+12V(LENS)OUT	+12V(at 2A)
22	NC	Non connection
5	LENS DC GND	GND for +12V(LENS)
23	RET 3 $\overline{\text{ON}}$ IN	Zi \geq 10k Ω ON:L OFF:High impedance
6	GND	GND
24	LENS ADRS 0 IN	* 1
7	NC	Non connection
25	LENS ADRS 1 IN	* 1

No.	SIGNAL	SPECIFICATION
8	LENS EX1 $\overline{\text{ON}}$ IN	* 2
26	LENS ADRS 2 IN	* 1
9	LENS EX2 $\overline{\text{ON}}$ IN	* 2
27	LENS ADRS 3 IN	* 1
10	LENS EX3 $\overline{\text{ON}}$ IN	* 2
28	EXTENDER 1 $\overline{\text{ON}}$ OUT	ON:GND OFF:High impedance
11	NC	Non connection
29	EXTENDER 2 $\overline{\text{ON}}$ OUT	ON:GND OFF:High impedance
12	IRIS POSI IN	Zi \geq 10k Ω 2 to 7V "3.4 \pm 0.1V(F16)" "6.2 \pm 0.1V(F2.8)"
30	NC	Non connection
13	ZOOM POSI IN	Zi \geq 10k Ω 2 to 7V "2V(WIND), 7V(TELE)"
31	INCOM 1 ENG/PRD IN	Zi \geq 10k Ω ENG:GND PRD:High impedance
14	RET 1 $\overline{\text{ON}}$ IN	Zi \geq 10k Ω ON:L OFF:High impedance
32	INCOM 2 ENG/PRD IN	Zi \geq 10k Ω ENG:GND PRD:High impedance
15	RET 2 $\overline{\text{ON}}$ IN	Zi \geq 10k Ω ON:L OFF:High impedance

No.	SIGNAL	SPECIFICATION
33	INCOM MIC 1 $\overline{\text{ON}}$ IN	$Z_i \geq 10k\Omega$ ON:GND OFF:High impedance
16	FOCUS POSI IN	$Z_i \geq 10k\Omega$ 2 to 7V "2V(MIN), 7V(∞)"
34	INCOM MIC 2 $\overline{\text{ON}}$ IN	$Z_i \geq 10k\Omega$ ON:GND OFF:High impedance
17	IRIS CONT OUT	2 to 7V "3.4 \pm 0.1V(F16)" "6.2 \pm 0.1V(F2.8)" $Z_i \geq 10k\Omega$
35	REGI VD OUT 	 $Z_i \geq 10k\Omega$
18	IRIS $\overline{\text{AUTO}}$ /MANU OUT	AUTO:L MANU:H $Z_i \geq 10k\Omega$
36	LENS DC GND	GND for LENS

*1 $Z_i \geq 10k\Omega$
1: High impedance
0: 0 \pm 0.5V
LENS ADRS 0 (Low-order bits)
LENS ADRS 4 (High-order bits)

*2 $Z_i \geq 10k\Omega$
1: High impedance
0: 0 \pm 0.5V

EX1	EX2	EX3	MODE
1	1	1	EXTENDER OFF
1	0	1	EXT-1(\times 1.5)
0	1	1	EXT-2(\times 2)
0	0	1	EXT-3(\times 2.5)

RET CONTROL (6P, FEMALE)



No.	SIGNAL	SPECIFICATION
1	INCOM 1 MIC $\overline{\text{ON}}$ IN	$Z_i \geq 10k \Omega$ ON:GND OFF:OPEN
2	INCOM 2 MIC $\overline{\text{ON}}$ IN	$Z_i \geq 10k \Omega$ ON:GND OFF:OPEN
3	GND	
4	NC	Non connection
5	RET 1 $\overline{\text{ON}}$ IN	$Z_i \geq 10k \Omega$ ON:GND OFF:OPEN
6	RET 2 $\overline{\text{ON}}$ IN	$Z_i \geq 10k \Omega$ ON:GND OFF:OPEN

2-3-2. Connector

When cable with connectors are set to the respective connectors on the connector panel during installation or service, the specified or equivalent connectors with cables, or the specified cable assemblies should be used, these are listed as follows;

Connector function	Parts No. and name of connector with cable
TRACKER (10P, FEMALE)	1-506-522-11 HIROSE HR10R-10P-10P equality
MIC (3P, MALE)	1-508-083-11 XLR-3P, FEMALE CANON XLR-3-11C equality
SCRIPT (4P, FEMALE)	1-560-343-11 HIROSE KMC9BPG-4P equality
RET CONTROL (6P, FEMALE)	1-560-078-31 HIROSE HR10-7PA-6P equality
VF (25P, FEMALE)	1-560-904-11 JAE DBC-25P-FD equality
MONITOR OUT PROMPT OUT (BNC)	1-560-069-11 PLUG, BNC

2-4. SETUP

1. Attach the camera head to the tripod. (For details refer to Section 1-4-1. "Attaching the Camera Head to the Tripod".)
2. Attach the lens to the camera head. (For details, refer to Section 1-4-2. "Attaching the Lens to the Camera Head".)
3. Attach the viewfinder to the camera head. (For details, refer to Section 1-4-3. "Attaching the viewfinder to the Camera Head".)
If the viewfinder VF-502 is to be attached, refer to the operation manual for the VF-502.
4. Open the right and left side panels, referring to Section 3-1. "SIDE PANELS OPENING".
5. Set the switches on the PC board shown below according to your requirement.
Section 2-5 details switches' function.
They are set to the position shown in Bold-Face type at the factory.

AU-129 Board

- S1(PGM1 MIX)[D-8] "ON ↔ OFF"
- S2(PGM2 MIX)[D-9] "ON ↔ OFF"
- S3(TRK PGM)[E-15] "ON ↔ OFF"
- S4(TRK INCOM2)[E-15] "ON ↔ OFF"
- S5(TRK LEVEL)[I-15] "0dBs ↔ - 20dBs"
- S6(INCOM1 GAIN)[PANEL] "- 6dB ↔ 0dB ↔ +6dB"
- S7(CARBON/DYNAMIC)[PANEL] "C ↔ D"
- S8(INCOM2 GAIN)[PANEL] "- 6dB ↔ 0dB ↔ +6dB"
- S9(CARBON/DYNAMIC)[PANEL] "C ↔ D"
- S10(MIC POWER)[PANEL] "ON ↔ OFF"

MS-33 Board

- S1(SAFETY ZONE)[PANEL] "80% ↔ 90%"
- S2(ZOOM INDICATOR)[PANEL] "A ↔ B"
- S3(ZOOM IND ON)[PANEL] "ON ↔ OFF"
- S4(CENT MARKER V POS)[PANEL] "0~6"
- S5(CALL)[PANEL] "ON ↔ OFF"
- S6(VF SELECT)[PANEL] "B/W ↔ COLOR"
- S7(MONITOR OUT SELECT)[PANEL] "VF ↔ RET"

6. Connector the camera to the CCU with a triax cable.
See the Figure below.

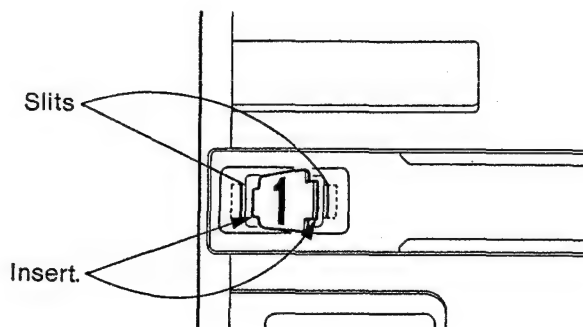
7. Turn on the power of CCU and supply the power to the camera. Make sure that the power indicator on the rear panel of the camera lights up and the camera operates.

8. Perform the following adjustments.

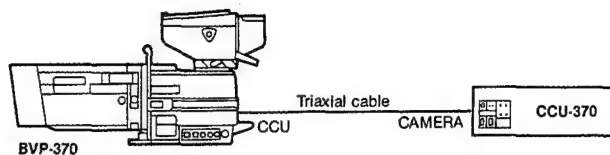
- Lens adjustments
 - Back focus distance adjustment
 - Diascope position adjustment
 - Projector color-temperature adjustment
- White shading adjustment
- Auto-iris check
- Intercom audio level check

Perform the lens adjustments referring to the lens manual. As for the other adjustments, refer to Section 5 "ALIGNMENT" in this manual.

9. Attach the number plate corresponding to the number of the connected camera.



10. Connector the peripheral devices according to use.



2-5. FUNCTION OF SWITCHES ON PC BOARD

AT-54 board

- S1: MODE SELECT
- S2: DATA

When setting the switch S1 to "0" and S2 to UP, analog control data except the master black data is preset.

When setting the switch S1 to "1" and S2 to UP, auto-iris OVERWRITE data is preset to center of reference value.

After presetting, be sure to set the switch S1 to F.

Consult your authorized Sony representative for details on other functions.

AU-129/AU-129P board

- S1: PGM 1 MIX

BVP-370: When the switch is set to ON, the INCOM 1 signal and PGM 1 signal are mixed each other mixed signal is output as INCOM 1 output and PGM 1 output. When this switch is set to OFF, the INCOM 1 OUT signal and PGM 1 OUT signal are output independently.

Normally set to OFF.

BVP-370P: Be sure to set the switch to OFF.

- S2: PGM 2 MIX

BVP-370: When the switch is set to ON, the INCOM 2 signal and PGM 2 signal are mixed each other, mixed signal is output as INCOM 2 output and PGM 2 output. When this switch is set to OFF, the INCOM 1 OUT signal and PGM 1 OUT signal are output independently. Normally set to OFF.

BVP-370P: Be sure to set the switch to OFF.

- S3: TRK PGM

Set the switch only when using the TRACKER connector. When mixing the PGM signal with the TRACKER output signal, set it to ON.

Factory-setting is ON.

- S4: TRK INCOM 2

Set this switch only when using the TRACKER connector. When the switch is set to ON, the INCOM 2 signal is mixed with the TRACKER output signal. The INCOM 1 signal is always output as TRACKER output signal.

This switch is factory-set to ON.

- S5: TRK LEVEL

Input level 0 dBs or -20 dBs is selectable.

Normally set to 0 dBs.

- S6: INCOM 1 GAIN

This switch selects the INCOM 1 audio level, which is sent to the CCU. Set the switch S6 to -6 dB, 0 dB or +6 dB to meet the input level.

This switch is factory-set to 0 dB.

- S7: CARBON/DYNAMIC

This switch selects the type of the INCOM 1 microphone, DYNAMIC or CARBON in accordance with the microphone is use.

Factory-setting is C (CARBON).

- S8: INCOM 2 GAIN

This switch selects the INCOM 2 audio level, which is sent to the CCU. Set the switch S8 to -6 dB, 0 dB or +6 dB to meet the input level.

This switch is factory-set to 0 dB.

- S9: CARBON/DYNAMIC

This switch selects the type of the INCOM 2 microphone, DYNAMIC or CARBON in accordance with the microphone in use.

Factory-setting is C (CARBON).

- S10: MIC POWER

When a microphone such as the Sony C-38B, which is phantom-powered, is used, set the switch to ON. Power will be supplied to the microphone via the MIC IN CH-1/CH-2 connector.

Normally set to OFF.

IE-26/IE-26P board

- S1: SKIN SET

Normally set to OFF.

Consult your authorized Sony representative for details on use of this switch. As for adjustment method, refer to Section 5-1-4 Note for Adjustment.

- S2: DTL

When this switch is set to ON, the detail function can be set to ON or OFF by the CCU. When this switch is set to OFF, image enhancement becomes inoperative as the instructions from the CCU is invalid.

This switch is normally set to ON.

- S3: HF ON

When this switch is set to ON, the detail signal of boost frequency 10 MHz is output from the IE-26/26P board.

Normally set to ON.

- **S4: LF ON**

When this switch is set to ON, the details signal of boost frequency 5 MHz is output from the IE-26/26P board. Normally set to ON.

MS-33 board

- **S1: SAFETY ZONE**

This switch selects size of safety zone frame, which is displayed on the viewfinder screen when the SAFETY ZONE switch on the rear panel is set to ON.

When this switch is set to 80%, the frame showing 80% of the picture shot by the camera is displayed. When this switch is set to 90%, the frame showing 90% of the picture is displayed.

This switch is factory-set to 90%.

- **S2: ZOOM INDICATOR**

This switch selects indication mode of zoom position, which is displayed on the viewfinder screen, when the switch S3 (ZOOM IND ON) on the MS-33 board is set to ON.

Indication modes A and B are as follows.



This switch is factory-set to A.

- **S3: ZOOM IND ON**

When the switch is set to ON, the zoom position is displayed on the viewfinder screen. There are two indication modes, which can be selected by the switch S2 (ZOOM INDICATOR) on the MS-33 board.

This switch is factory-set to OFF.

- **S4: CENT MARKER V POS**

This switch is used to set the CENT MARKER position in the vertical direction. Use this switch when the CENT MARKER position is aligned with the optical axis of lens. The switch is factory-set to "6".

- **S5: CALL**

By setting the switch to ON, UP TALLY lamp of the viewfinder or SIDE TALLY lamp of the camera head lights up when the CALL button of the MSU or RCP is pushed.

This switch is factory-set to OFF.

- **S6: VF SELECT**

Set the switch in accordance with a viewfinder in use. Set the switch to B/W for use of monochrome viewfinder and set the switch to COLOR for use of color viewfinder. This switch is factory-set to COLOR.

- **S7: MONITOR OUT SELECT**

This switch selects an output signal at the MONITOR OUT connector (BNC).

When the switch is set to VF, the VF video signal is output. When it is set to RET, the RET video signal is output.

This switch is factory-set to VF.

- **S8: GATE MARKER**

When the switch is set to ON, you can observe where a gate to be detected appears on the viewfinder during auto setup adjustment.

Normally set to OFF.

PR-130 board

- **S1: GAMMA**

When the switch is set to OFF, instruction from the CCU becomes invalid and gamma correction is always set to OFF.

Normally set to ON.

VA-86 board

- **S1: FLARE**

When the switch is set to OFF, the flare compensation circuit on the VA-86 board, which is controlled by the potentiometer or the CCU, does not work. As a result, no-compensation signal is output.

Normally set to ON.

SG-167/167P board

- **S1: R OFF**

This switch is used to check and adjust the video signal system circuit for the TRIAX system.

Normally set to ON.

- **S2: G OFF**

This switch is used to check and adjust the video signal system circuit for the TRIAX system. Normally set to ON.

FILTER UNIT

- **S1: MOTOR**

When the switch is set to OFF, the motor for the motorized filter is turned off and it can be rotated manually.

Normally set to ON.

2-6. USE OF SUPPLIED PLUGS

The BVP-370/P supplies the 4-pin, 6-pin and 10-pin connector plugs as supplied accessory. Use of these plugs are briefly described here.

2-6-1. Use of 10-pin Plug

This plug is used for the TRACKER connector on the right side connector panel. For details on the pin assignment and input/output signal specifications, refer to Section 2-3-1 Connector Input and Output signals. The input/output signals are described below.

Pins 1, 3: TRACKER RECEIVE OUT

Normally, only the INCOM1 signal sent from the CCU is output at pins 1 and 3 as the TRACKER output. As the INCOM1 signal, the PROD or ENG signal is selectable with the INCOM PROD/ENG switch on the rear panel.

By changing switch settings on the AU-129/129P board, the PGM signal on the INCOM2 signal can be mixed with the TRACKER output. The INCOM2 signal is the same as the INCOM1 signal, so the PROD or ENG signal is selectable.

The PGM signal is mixed when setting the switch S3 (TRK PGM) on the AU-129 board (address: E-15) to ON.

The INCOM2 signal is mixed when setting the switch S4 (TRK INCOM2) on the AU-129 board to ON.

Pins 7, 8: TRACKER TALK IN

0 dBs or -20 dBs of input levels can be selected by the switch S5 (TRK LEVEL) on the AU-129/129P board (address: I-15).

2-6-2. Use of 6-pin Plug

This plug is used for the RET CONTROL connector on the right side connector panel.

For details on the pin arrangement and input/output signal specifications, refer to Section 2-3-1.

This is available for remote switchings of the return video 1 and 2, mixed return video, and intercom microphone.

2-6-3. Use of 4-pin Plug

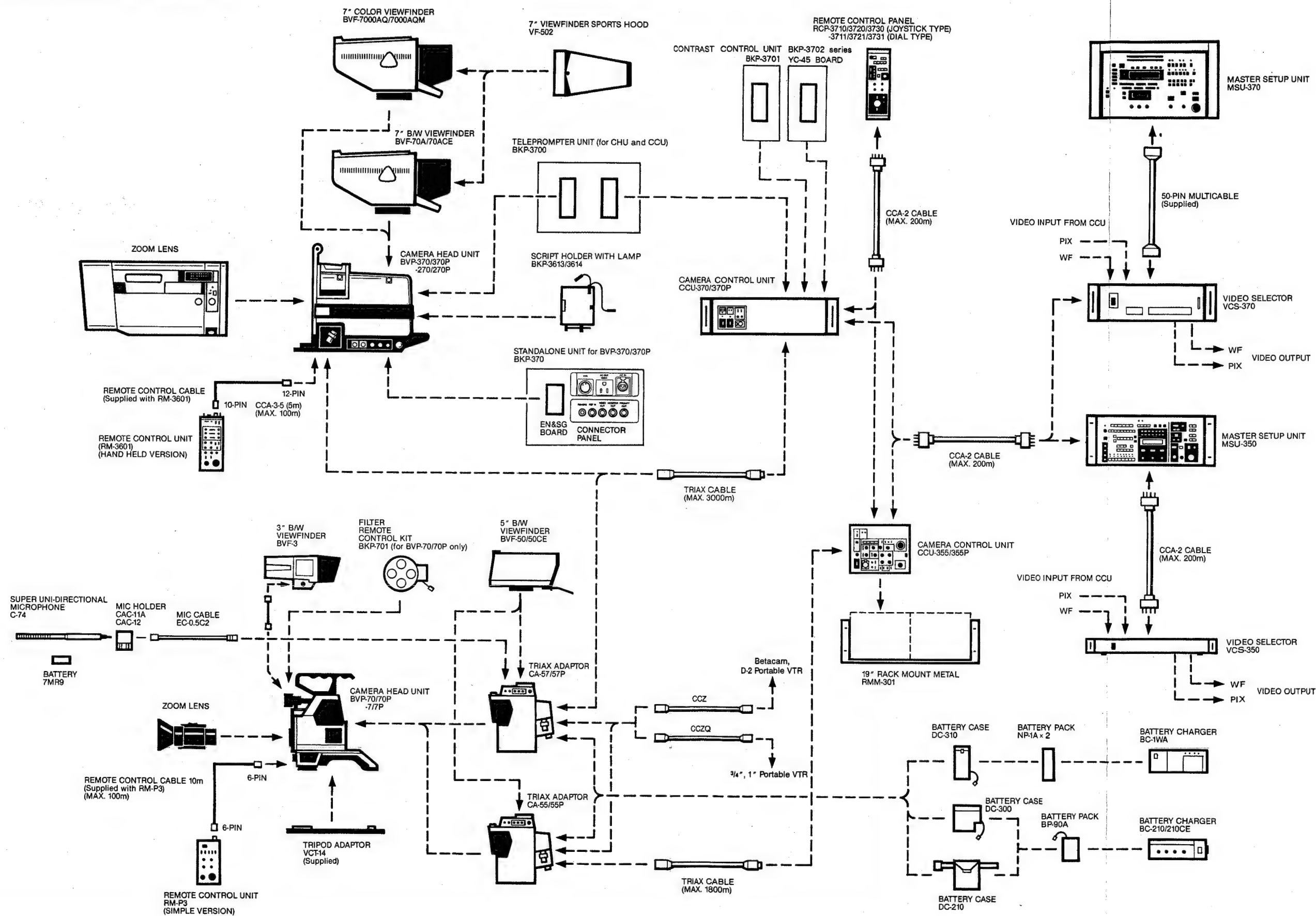
This plug is used for the SCRIPT connector on the right side connector panel.

Power supply for a script light is available.

For details on the pin arrangement and input/output signal specifications refer to Section 2-3-1.

If the script holder BKP-3613/3614 is used, this plug is not necessary.

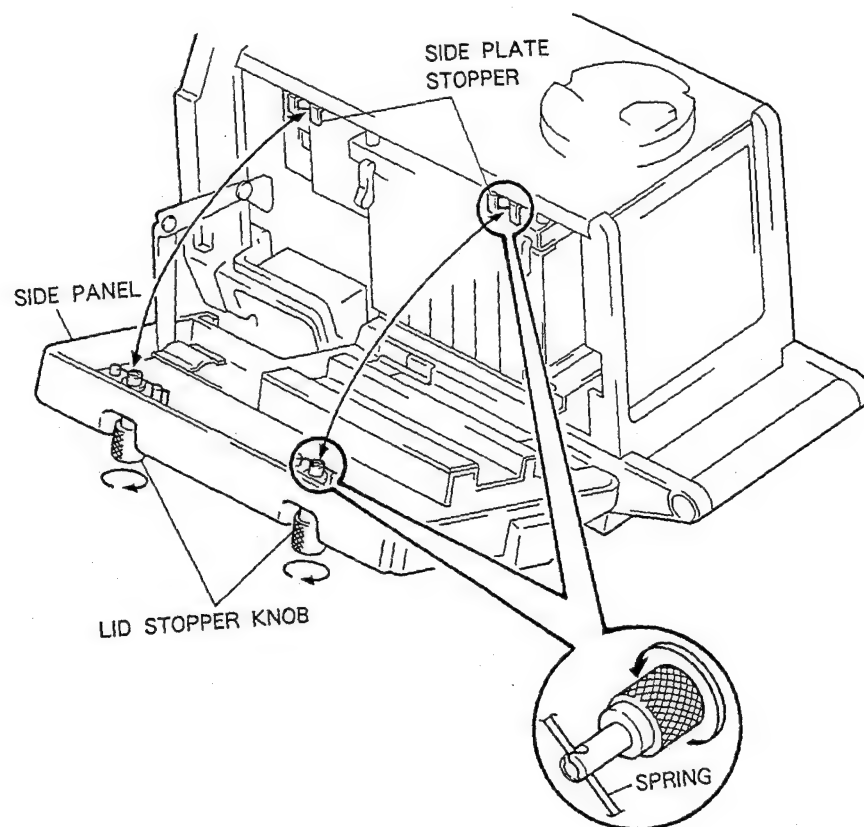
2-7. INSTANCE OF SYSTEM CONNECTION



SECTION 3 REPLACEMENT OF MAIN PARTS

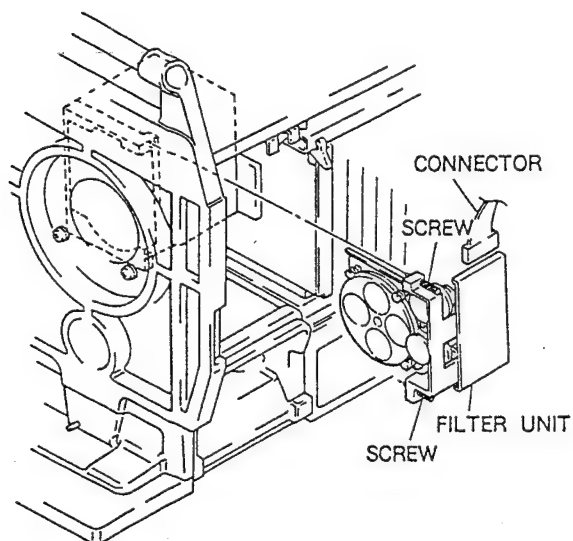
3-1. SIDE PANELS OPENING

1. Turn the LID STOPPER KNOB counterclockwise to open the side panel.
2. To shut the side panel, match the spring of the SIDE PLATE STOPPER with the groove of the LID STOPPER KNOB to turn clockwise.



3-2. REPLACEMENT OF FILTER UNIT

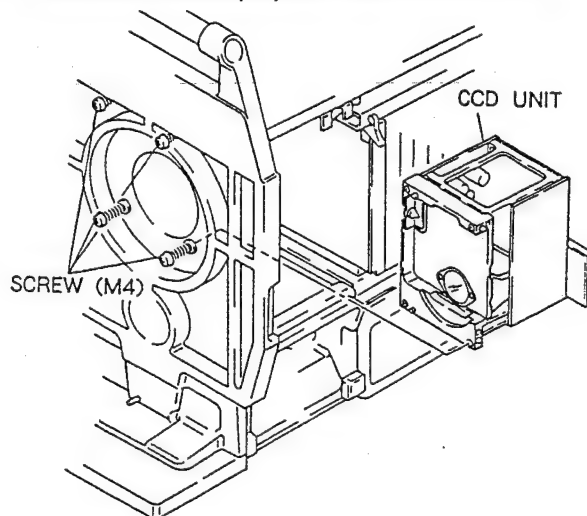
1. Remove the connector shown in the figure and loosen two screws. Remove the FILTER UNIT.



2. When installing the FILTER UNIT, reverse the procedures for removal.

3-3. REPLACEMENT OF CCD UNIT

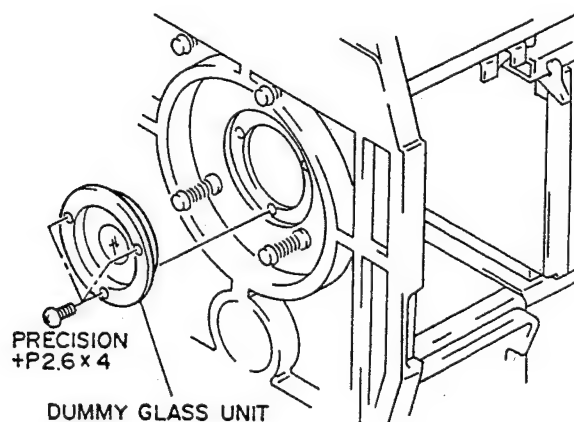
1. Remove the filter unit, referring to Section 3-2. REPLACEMENT OF FILTER UNIT, Step 1.
2. Loosen four screws (M4) and remove the CCD unit.



3. When installing a new CCD unit, reverse the procedures for removal.

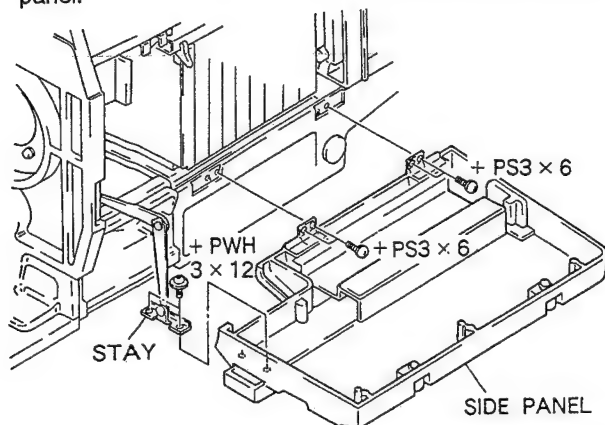
When replacing the CCD unit having the following block number with the CCD unit of parts number A-7575-218-A or A-8267-490-A (only for BVP-370/370P), replacing the LOW PASS FILTER UNIT with the DUMMY GLASS UNIT of part number 1-547-403-11 is also required at the same time. Proceed as follows.
[Applicable Block Number]
LxxxxxN, LxxxxxP

Remove three screws (PRECISION +P2.6 × 4) fixing the LOW PASS FILTER UNIT. Attach the DUMMY GLASS UNIT with the three screws in place of the LOW PASS FILTER UNIT.

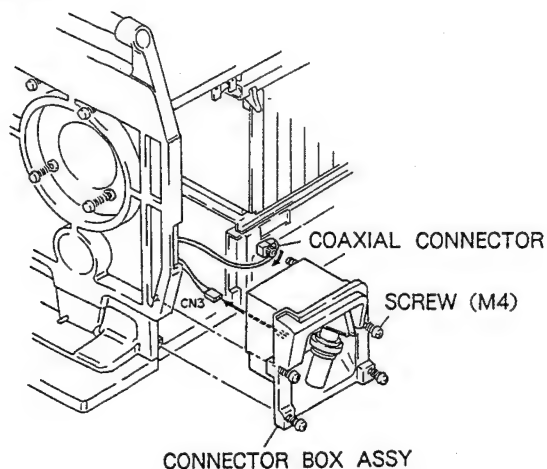


3-4. REPLACEMENT OF TRIAX CONNECTOR

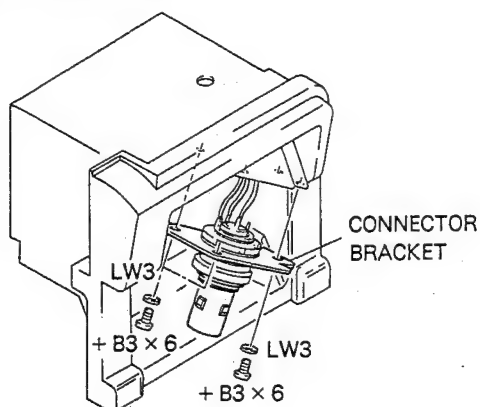
1. Open the right side panel. Remove two screws (+PWH3 × 12) and remove the STAY.
2. Remove four screws (+PS3×6) and remove the side panel.



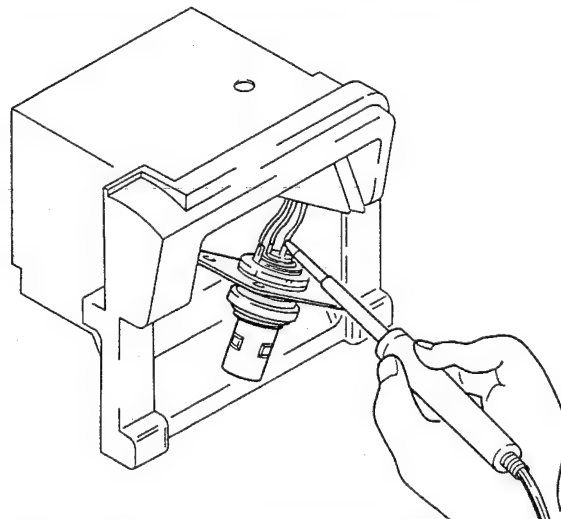
3. Loosen four screws(M4) and remove the CONNECTOR BOX ASSY. At this time, do not pull it toward you forcibly. Disconnect the connector CN3 on the LF-15 board. Unscrew the coaxial connector in the direction of arrow.



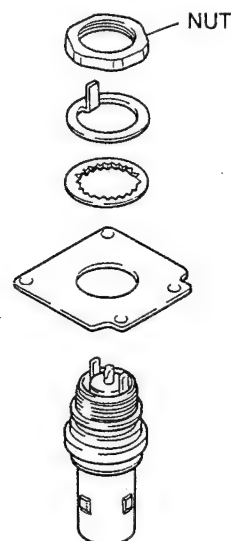
4. Remove four screws (+B3×6) and remove the CONNECTOR BRACKET.



5. Unsolder the three lead wires with a soldering iron.

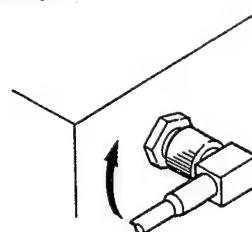


6. Remove the nut and disassemble the connector as illustrated.



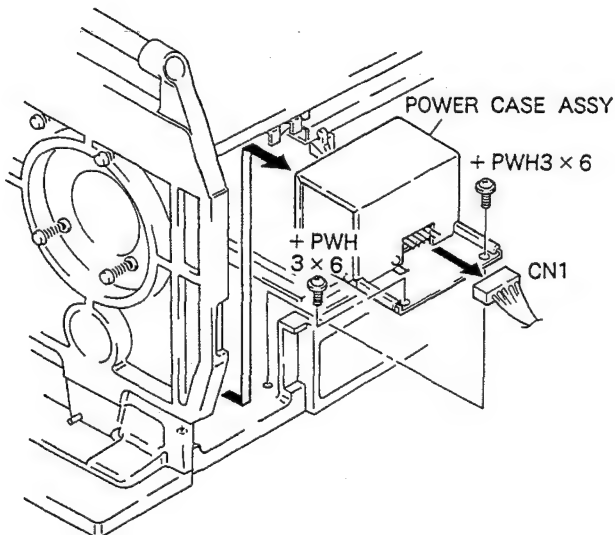
7. Install a new TRIAX connector by reversing the procedures for removal.

Note: When connecting the coaxial connector to the CONNECTOR BOX ASSY, tighten the screw and turn the connector head in the direction of arrow to fix it securely.

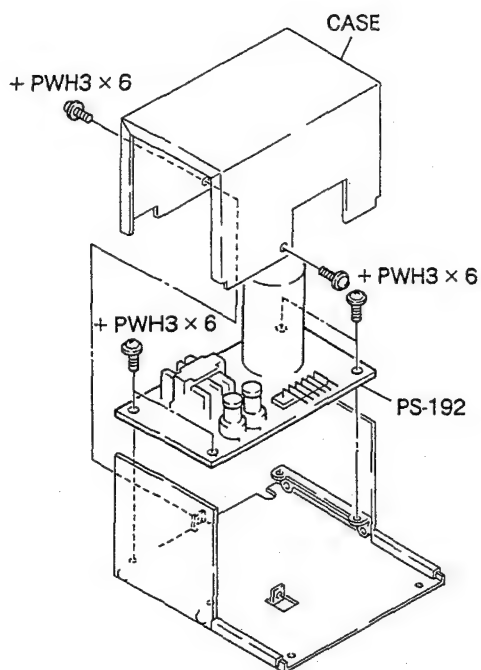


3-5. REMOVAL OF POWER CASE ASSY

1. Disconnect CN1 of the PS-192 board.
2. Remove two screws (+PWH3×6) to remove the POWER CASE ASSY in the direction of arrow.

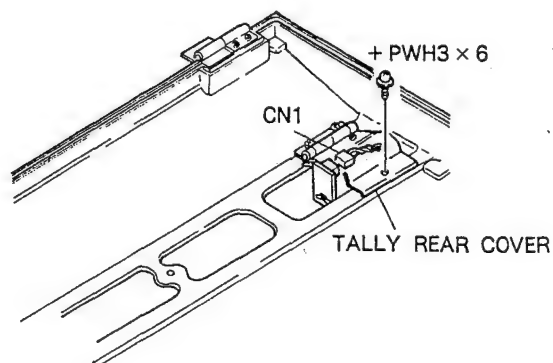


3. Remove two screws (+PWH3×6) to remove the CASE.
4. Remove the four screws (+PWH3×6) to remove the PS-192 board.

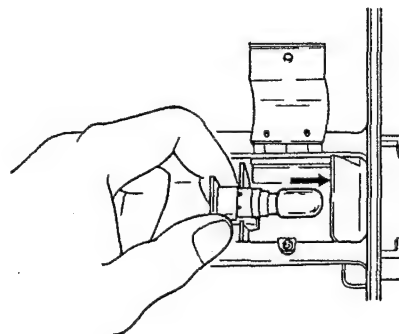


3-6. REPLACEMENT OF TALLY LAMP

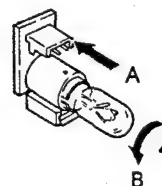
1. Open the side panel, on which the tally lamp to be replaced is mounted.
2. Remove the screw (+PS3×6) and open the TALLY REAR COVER. Disconnect the connector CN1 on the CN-451 board.



3. Slide the tally lamp socket in the direction of the arrow.



4. To remove the tally lamp, turn it in the direction of arrow B while pushing it in the direction of arrow A. Replace it with a new one.

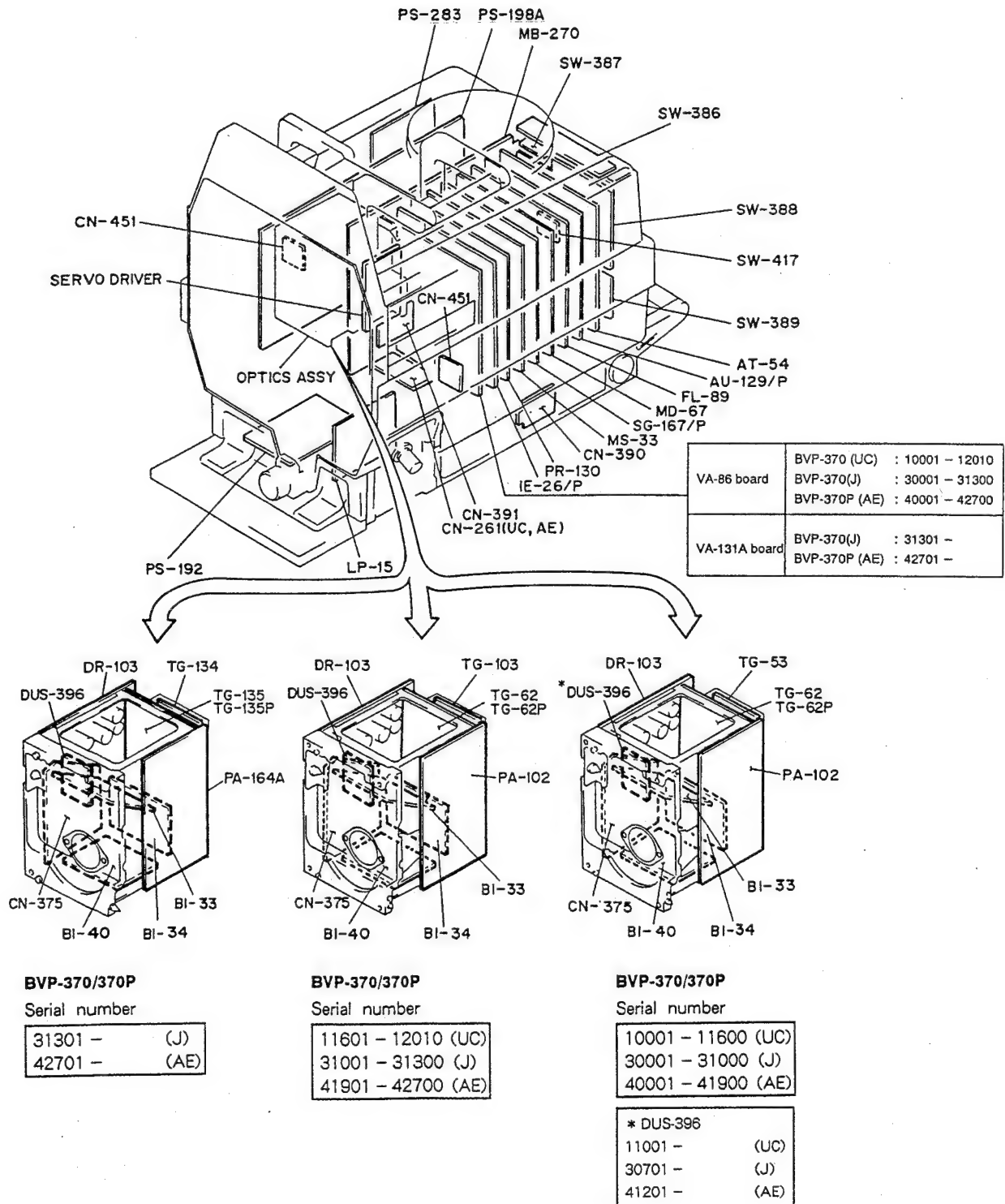


SECTION 4

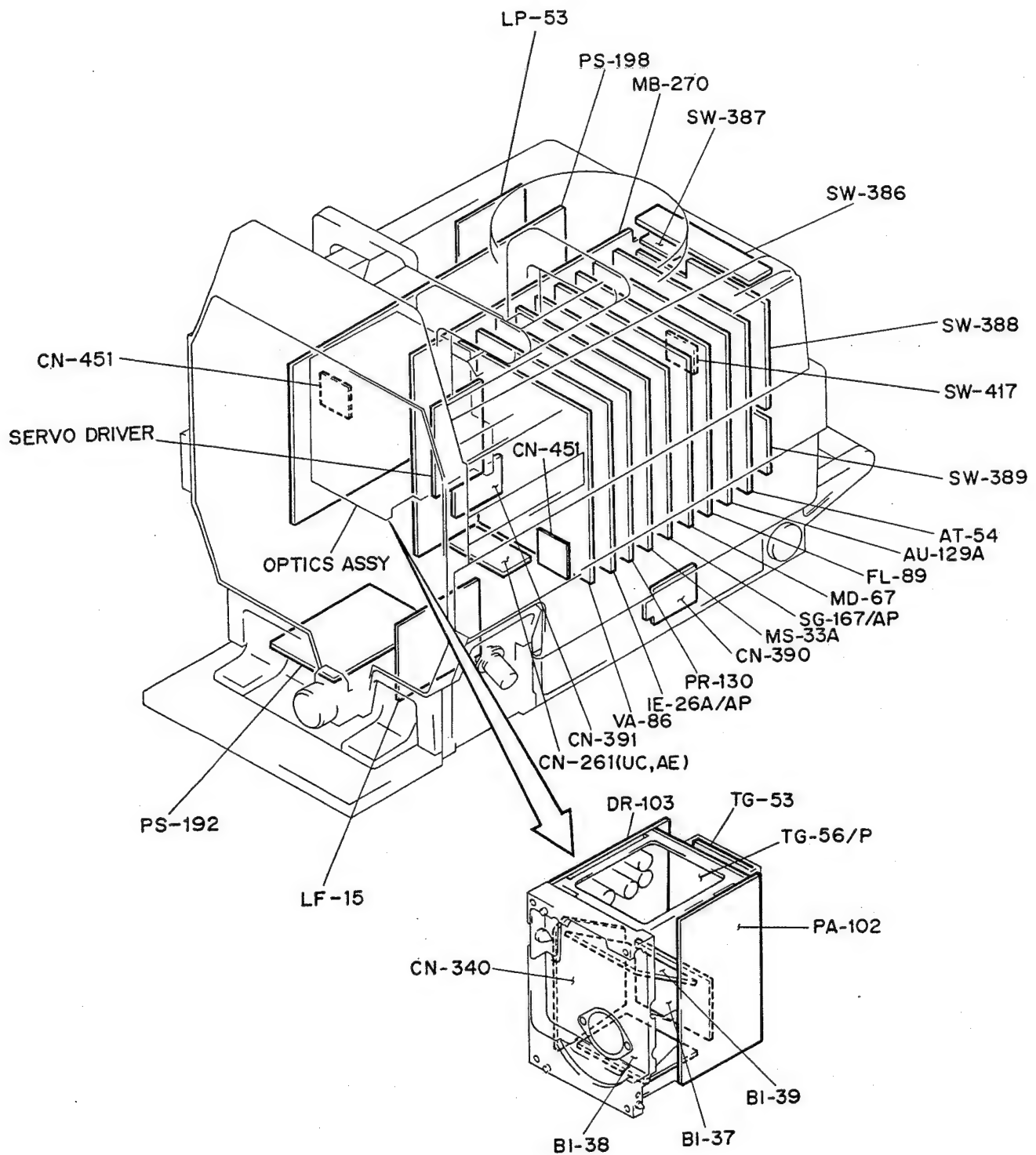
SERVICE INFORMATION

4-1. BOARD LAYOUT

BVP-370/370P



BVP-270/270P



4-2. CIRCUIT DESCRIPTION

The BVP-370/370P/270/270P electric circuit consists of the followings.

- POWER SUPPLY SYSTEM
- SYNC SIGNAL SYSTEM
- CCD BLOCK SYSTEM
- VIDEO SIGNAL SYSTEM
- AUTO CONTROL SYSTEM
- AUDIO MODULATION/DEMODULATION SYSTEM
- VIEWFINDER SYSTEM

[POWER SUPPLY SYSTEM]

AC 240V voltage from the CCU is output from the filter on the LF-15 board and is supplied to the PS-192 and PS-198 boards. The PS-192 and PS-198 boards generate DC voltage necessary to operate the camera from AC240V voltage and supply the DC voltage to each board.

[SYNC SIGNAL SYSTEM]

The SG-167/167P/167AP board contains the SYNC signal generator and timing pulse generator. Various SYNC signals and timing pulse are generated, based on the H CONT signal from the CCU and the V RESET pulse, which is generated by being decoded serial data from the CCU by the AT-54 board.

[CCD BLOCK SYSTEM]

MODEL	CCD BLOCK COMBINATION TABLE
BVP-270/270P	TG-53, TG-56/56P, PA-102 DR-103, BI-37/38/39, CN-340
BVP-370/370P	TG-53, TG-62/62P, PA-102 DR-103, BI-33/34/40, CN-375
BVP-270/270P	TG-103, TG-56/56P, PA-102 DR-103, BI-37/38/39, CN-340
BVP-370/370P	TG-103, TG-62/62P, PA-102 DR-103, BI-33/34/40, CN-375

The TG-53/103 board and TG-62/62P (; BVP-370/P, TG-56/56P ; BVP-270/P) board generate timing pulses for CCD driving and a sample-hold pulse for CCD output signal sampling, based on the SYNC signal from the SG board and output them to the DR-103 and the PA-102 board.

The DR-103 board converts the timing pulse from the TG-53/103 and TG-62/62P (; BVP-370/P, TG-56/56P ; BVP-270/P) boards into the driving clock pulse, which can directly control the CCD. The DR-103 board also generates V SUB voltage for the CCD and supplies it to the BI-33, BI-34 and BI-40 (; BVP-370/P, BI-37, 38, 39 ; BVP-270/P) board via the CN-375 (; BVP-370/P, CN-340 ; BVP-270/P) board.

The CCD for B-ch, G-ch and R-ch is mounted on the BI boards respectively, where the driving clock pulse and the V SUB voltage from the DR-103 board are added to the CCD via the CN-375 (BVP-370/P)/340 (BVP-270/P) board. The CCD output signals for each channel are output to the PA-102 board.

The PA-102 board samples and holds the CCD output signals using the sample-hold pulse which is sent from the TG-53/103 and TG-62/62P (; BVP-370/P, TG-56/56P ; BVP-270/P) boards to get the video signal. The PA-102 board feeds the video signal to the VA-86/131A board.

MODEL	CCD BLOCK COMBINATION TABLE
BVP-370P	TG-134, TG-135/135P, PA-164A DR-103, BI-33/34/40, CN-375

The TG-134 board and TG-135/135P (; BVP-370/P) board generate timing pulses for CCD driving and a sample-hold pulse for CCD output signal sampling, based on the SYNC signal from the SG board and output them to the DR-103 and the PA-164A board.

The DR-103 board converts the timing pulse from the TG-134 and TG-135/135P (; BVP-370/P) boards into the driving clock pulse, which can directly control the CCD. The DR-103 board also generates V SUB voltage for the CCD and supplies it to the BI-33, BI-34 and BI-40 (; BVP-370/P) board via the CN-375 (; BVP-370/P) board.

The CCD for B-ch, G-ch and R-ch is mounted on the BI boards respectively, where the driving clock pulse and the V SUB voltage from the DR-103 board are added to the CCD via the CN-375 (BVP-370/P) board. The CCD output signals for each channel are output to the PA-102 board. The PA-102 board samples and holds the CCD output signals using the sample-hold pulse which is sent from the TG-134 and TG-135/135P (; BVP-370/P) boards to get the video signal. The PA-164A board feeds the video signal to the VA-131A board.

[VIDEO SIGNAL SYSTEM]

VA-86 board	BVP-370 (UC) : 10001 - 12010 BVP-370P (AE) : 40001 - 42700
VA-131A board	BVP-370P (AE) : 42701 -

The R-ch, G-ch and B-ch video signals are supplied from the CCD to the VA-86/131A board, on which the following processings are performed. After that the video signals are sent to the IE-26/26A/26P/26AP board.

- Switching the video amplifier gain with the GAIN switch.
- BLKG cleaning
- Gain control
- White/Black shading correction
- Flare compensation
- PRE KNEE correction
- PRE WHITE CUP

The IE-26/26A/26P/26AP board generates the detail signal from the G-ch and R-ch video signals and sends it to the PR-130 board. The masking processing is also performed on the IE board, that is, a few primary color signals are added to the R-ch, B-ch and G-ch video signals to compensate the color reproducibility for the CCD, by setting the MATRIX button on the MSU control panel to ON.

The R-ch, G-ch and B-ch video signals are then sent to the PR-130 board, where the following processings are performed. The PR-130 board sends the processed video signals to the SG-167/167P/167AP board.

- Addition of detail signal
- Pedestal control
- BLKG cleaning
- KNEE correction
- GAMMA correction
- WHITE/BLACK CLIP

The R-ch, G-ch and B-ch video signals sent from the PR-130 board are input to the Y, R-Y and B-Y matrix circuits respectively on the SG board. The mixed ratio of the R-ch, B-ch and G-ch video signals to obtain the Y, R-Y and B-Y signals on the matrix circuit is as follows.

$$\begin{aligned} Y &= 0.30R + 0.59G + 0.11B \\ R-Y &= 0.70R - 0.59G - 0.11B \\ B-Y &= -0.30R - 0.59G + 0.89B \end{aligned}$$

The Y, R-Y and B-Y signals from the matrix circuit are sent to the MD-67 board and are modulated as follows.

$$\begin{aligned} Y &\rightarrow 18 \text{ MHz amplitude modulation (DSB)} \rightarrow Y \text{ RF} \\ R-Y &\rightarrow 36 \text{ MHz amplitude modulation (DSB)} \rightarrow R-Y \text{ RF} \\ B-Y &\rightarrow 36 \text{ MHz amplitude modulation (DSB)} \rightarrow B-Y \text{ RF} \end{aligned}$$

The R-Y RF signal, which is modulated by the carrier phase-shifted by 90 degrees against the carrier of the B-Y RF signal, is mixed with the B-Y RF signal. Mixed signal is sent to the FL-89 board as a CHROMA RF signal together with the Y RF signal.

The FL-89 board contains a multiplex filter, which unites or separates the Y RF and CHROMA RF signal from the MD-67 board, the AUDIO RF signal going in and out the AU-129/129P/129A board and the RET RF signal which is

sent to the MS-33/33A board after being demodulated by the FL-89 board. The above-mentioned Y RF and CHROMA RF signals are fed to the CCU via the filter on the LF-15 board.

[AUTO CONTROL SYSTEM]

Using the microprocessor, the AT-54 board automatically controls the auto-white balancing, auto-black balancing, gain control, pedestal control, KNEE control and gamma control and so on, based on a serial data from the CCU. The AT-54 board also generates a character signal to display the camera condition on the viewfinder screen based on the diagnosis signals for each board sent from the SG board and variable condition signals such as the IRIS POSI signal.

[AUDIO MODULATION/DEMODULATION SIGNAL]

The AU-129/129P/129A board divides the AUDIO RF signal sent from the CCU through the multiplex filter on the FL-89 board into six and demodulates the following signals respectively.

INCOM 1 and INCOM 2 signals
PGM 1 and PGM 2 signals
CCU DATA (Serial data)
H CONT signal

Demodulated INCOM 1, INCOM 2, PGM 1 and PGM 2 signals are sent to the INCOM/PGM connector on the camera rear panel, demodulated CCU DATA is sent to the interface CPU on the AT-54 board and demodulated H CONT signal is sent to the SYNC generator on the SG board.

CHU DATA from the sub-CPU on the AT-54 board, the INCOM 1/INCOM 2 signal from the INCOM/PGM connector on the camera rear panel and the MIC 1/MIC 2 signal from the MIC connector on the camera side are respectively FM-modulated and multiplexed. And they are supplied to the CCU as the AUDIO RF signal via the multiplex filter on the FL-89 board and the filter on the LF-15 board.

[VIEWFINDER SYSTEM]

The R-ch, G-ch and B-ch video signals from the PR-130 board and the RET signal from the FL-89 board are input to the MS-33/33A board. The signal input is set to ON or OFF with the select button on the camera rear panel.

The cursor signal and ZOOM IND signal generated by the MS-33/33A board and the character signal from the AT-54 board are added to the above signals and sent to the viewfinder and the MONITOR OUT connector on the camera side panel.

4-3. NOTE ON MAINTENANCE SERVICE

4-3-1. CCD Unit Replacement

Keep the CCD unit apart from electrostatic materials, because the CCD unit is sometimes broken by a static electricity.

If the CCD unit is broken, the whole CCD unit must be replaced.

4-3-2. PS-198 Board Power Voltage Error Detection Circuit

The PS-198 board contains the circuit which detects the power voltage error. If the error is detected, this circuit stops the power supply. In this case, turn off the power once. After you settle that trouble, turn on the power.

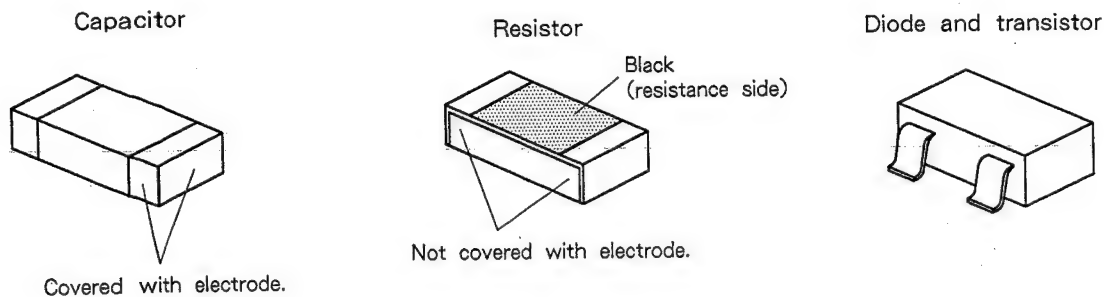
4-3-3. Note On Extracting Board

To avoid the trouble of PC boards, when checking or adjusting the camera, be sure to turn off the power before extracting boards.

4-3-4. Note On Replacement Parts

- (1) Safety Related Components Warning
Components identified by shading marked and \triangle marked on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony Parts whose part numbers appear as shown in this manual or in Service bulletins and service manual supplement published by Sony.
- (2) Standardization of Parts
Repair parts supplied from Sony Parts Center may not be always identical with the part which actually in use due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts". This manual's exploded views and electrical spare parts list are indicating the parts number of "the standardization genuine parts at present".
- (3) Stocked Parts
The parts marked with "S" in the SP column of the exploded views and electrical spare parts list are normally required for routine service work. Order for parts marked with "O" will be processed, but allow for additional delivery time.
- (4) Units of Capacitors, Inductors, and Resistors
The following units are omitted in the schematic diagrams, exploded views, and electrical parts lists unless otherwise specified;
Capacitor : μF
Inductor : μH
Resistor : Ω

4-3-5. Replacement of Chip Parts



Tools required

- Soldering iron of approx. 20W(Use a temperature controller, if possible, which can control the iron temperature to $270 \pm 10^\circ\text{C}$.)
- Desoldering metal braid(Parts No. 7-641-300-81)
- Solder(A solder of 0.6mm in diameter is recommended.)
- Tweezers

Soldering conditions

- Iron temperature of $270 \pm 10^\circ\text{C}$
- Soldering should be performed within two seconds.

Procedures

1. To remove a resistor or capacitor, place the tip of a soldering iron on chip parts to heat the parts, and then move it horizontally for removal while being desoldered. For removal of a diode or transistor, heat the one side, with two pins, of chip parts at the same time. Set the parts up when desoldered and remove two pins. And then remove the pin on another side.
2. Absorb solder by using a desoldering metal braid to smooth the land surface after removal.
3. Confirm by visual check that no trace is come off, no adjacent parts is damaged and no bridging occur.
4. Perform a thin pretinning on the trace.
5. Place new chip parts on the trace to solder its both sides.

Note: Do not reuse parts which have been removed.

For details, see "CHIP COMPONENTS manual"(Parts No. 9-963-089-01)prepared by Sony Corporation.

4-3-6. PROM IC

Each PROM IC on the PC board has a suffix to its original designation, which is shown in bold-face type in the following table. This suffix may change according to improvement of IC. Never use an IC having no suffix to its original designation, because its memory has not been programmed.

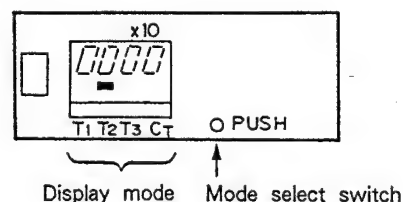
BOARD	REF. NO.	IC NAME
AT-54C	IC18	27C512G-20-P370WND
	IC30	27C256-BVP370V3.00
	IC33	μ PD28C64C
MS-33/33A	IC15	27C512G-20-370 CURSOR
	IC30	27C512G-370 MONISEL2

4-3-7. Digital Hour Meter

The digital hour meter (TM1) is mounted on the LP-53 board. The hour meter has four display modes of T1, T2, T3 and CT and the OPERATION METER mode T1 is now used.

This mode displays accumulated elapsed operation time that the power of the unit has been turned on.

The actual operation time is equal to the displayed value multiplied by 10.



It is recommended to perform the periodic check and maintenance based on the hour meter.

Note: The hour meter has a built-in battery which should be replaced every five years.
(Sony Parts No. 1-548-152-11)

4-3-8. Note on Replacement of CCD unit

When replacing the CCD unit with that having the following block number, make sure that a version of IC30 of AT-54C board is V3.00 or higher version. If not, it is necessary to replace the IC30 of the AT-54C board.

As for its part number, see Section D

"SPARE PARTS"

[Applicable Block Number]

EKA XXXXX

ELA XXXXX

4-4. WARNING MESSAGES

When a warning message is displayed on the viewfinder, take the following action.

① "NO CCU DATA"

This message is displayed when serial data sent from the CCU is not being received. In this situation, the camera cannot be controlled with the CCU. Check the signal transmission circuits and the interface circuits.

This message may be displayed when a single unit of the camera (without the CCU) is used after it was used with the CCU. In this case, however, there is no problem with the operation of the camera.

② "FRAMING ERR" or "PARITY ERR"

This message is displayed when an error is detected in serial data sent from the CCU.

Check the signal transmission circuits and the interface circuits.

4-5. ERROR MESSAGES IN AUTOMATIC ADJUSTMENT MODE

When an error message is displayed on the viewfinder in automatic adjustment mode, take the following action.

- "ERROR"

This message is displayed when there is an error which adversely affects the adjustment. The automatic adjustment stops when the message is displayed and the compensation value returns to the value set immediately before adjustment. Take appropriate action by referring to the message (① to ⑨ below) displayed at that time.

- "CAUTION"

This message is displayed when the compensation value is close to the limit of the compensation range. Adjust the PC board as soon as possible.

① "OVER FLOW"

This message is displayed when the compensation value exceeds the limit of the compensation range. Check the setting of the camera. If the setting is correct, the PC board must be adjusted.

② "LOW LEVEL"

This message is displayed when the video signal level is too low to be adjusted during the white balance adjustment. Raise the video signal level by increasing the illumination intensity, opening the lens iris, or increasing the gain so that it can be adjusted.

③ "TIME LIMIT"

This message is displayed when automatic adjustment can not be completed within the specified time. Check the setting of the camera. If the setting is correct, the PC board must be adjusted.

④ "NOT OPENED"

This message is displayed when the lens iris is not opened during the white balance adjustment. Check the lens and ND filter.

Other Messages

- "BREAK"

This message is displayed when the automatic adjustment is interrupted by the BREAK command.

4-6. SELF-DIAGNOSIS

The BVP-370/370P/270/270P is provided with the self-diagnostic function which displays a faulty PC board on the viewfinder.

The details of diagnosis for each board are as follows.

By setting the DISPLAY switch on the rear panel, the statuses of internal circuit boards determined by self-diagnosis can be displayed. For details, see Section 1-6 Viewfinder screen indications.

BOARD STATUS							
VA	IE	PR	MS				
①	②	③	④				
SG	AU	MD	FL				
⑤	⑥	⑦	⑧				

① VA board ② IE board ③ PR board ④ MS board

Self-diagnosis operates on the condition that the levels of the R, G and B video signals from each board exceed the standard level.

⑤ SG board

Self-diagnosis operates on the condition that H DEF TRIG \overline{JL} and V DEF TRIG \overline{J} are sent from the SG board.

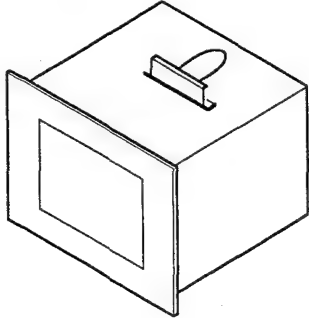

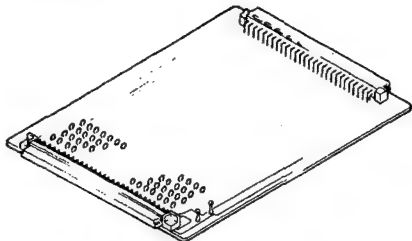
⑦ MD board

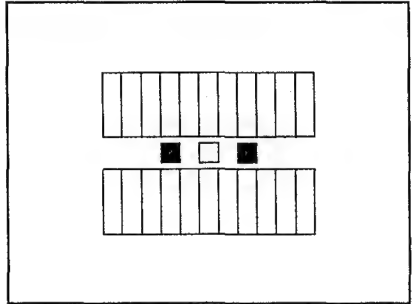
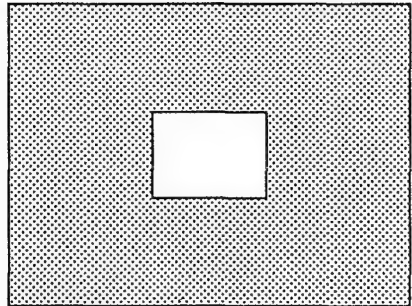
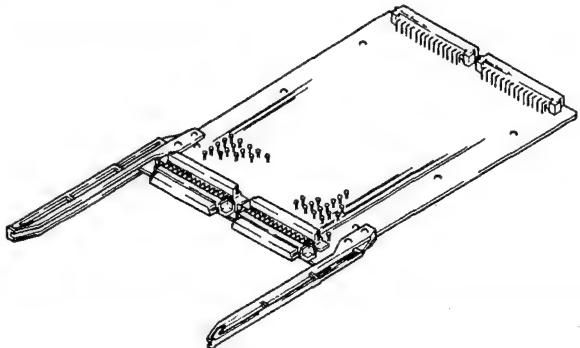
Self-diagnosis operates on the condition that the level of the RF signal from the video signal transmission circuit exceeds the standard level.

SECTION 5 ALIGNMENT

5-1. PREPARATION

5-1-1. Equipment Required

J-6029-140-B	Pattern Box PTB-500
PTB-220 is also available.	
	
J-6026-110-A	Burst Chart
	
A-7515-082-A	Extension Board EX-228
Supplied accessory (BVP-370/370P)	
	

J-6026-130-B	Gray Scale Chart
Stick the velvet (black) at the both sides of white pattern in the center to avoid the light leakage.	
	
White Window Chart	
Make hole in the center of black paper as shown in the figure.	
	
A-7515-097-A	Extension Board EX-240
Supplied accessory (CCU-370/370P)	
	

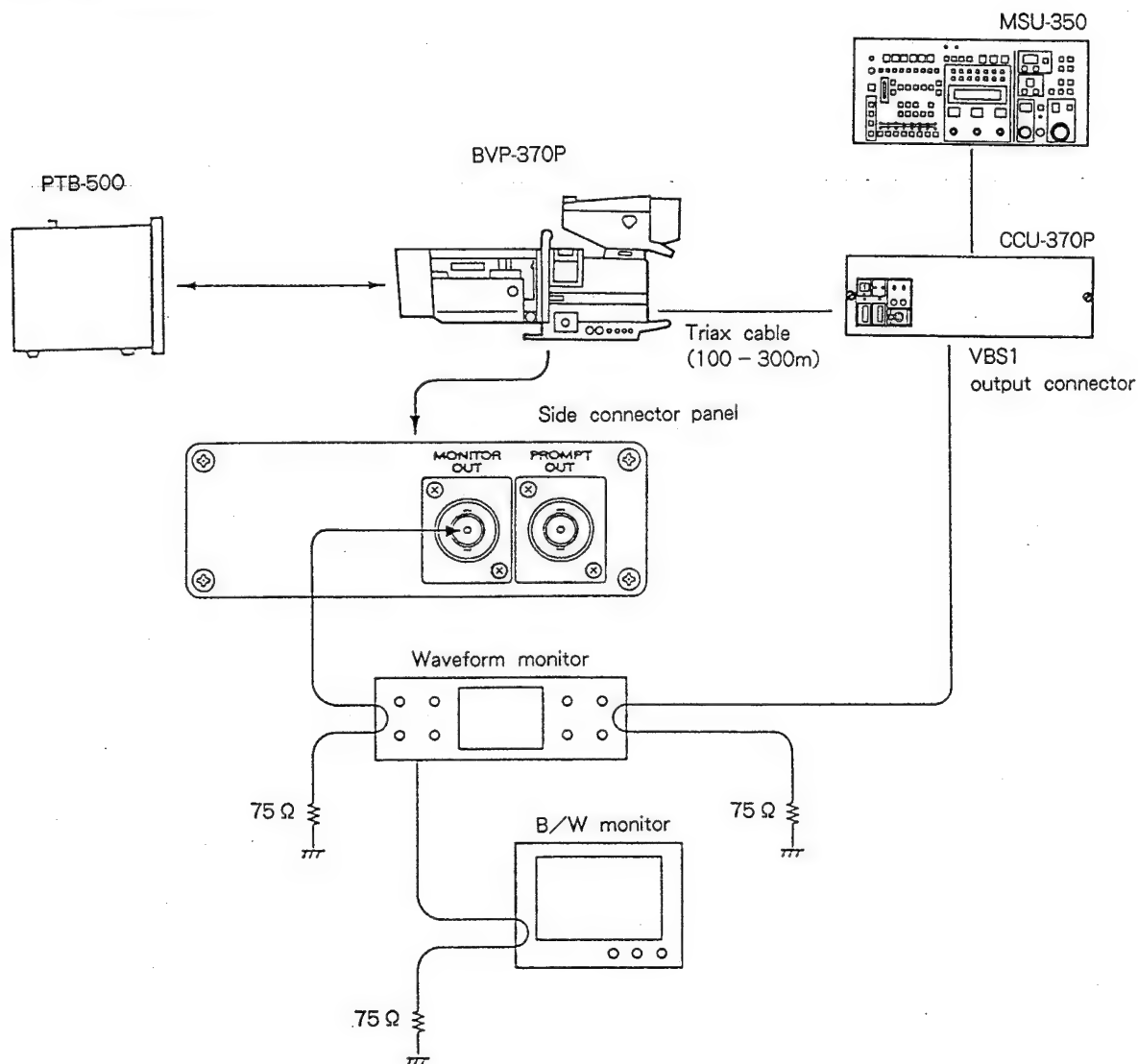
Measuring Equipment

Digital voltmeter
Oscilloscope (150 MHz or more)
Waveform monitor
B/W monitor
(Horizontal resolution: more than 700 TV lines)
Audio generator
Frequency counter
Spectrum analyzer
DC power supply (0 to 5 Vdc, continuously variable)

Peripheral Equipment

Camera control unit	CCU-370P
Master setup unit	MSU-350

5-1-2. Connection



Note: This alignment is written on the premise that the MSU-350 is used. Therefore, the condition of switch setting, and so on, are for the MSU-350.

For audio connection

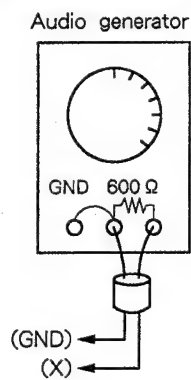


Fig. 1

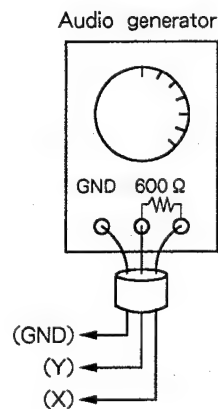


Fig. 2

5-1-3. Initial Setting

1. Initial setting of each switch

BVP-370P

[VA-86/131A board]	
S1 (FLAREfor VA-86 board)	"ON"
S701 (FLARE.....for VA-131A board)	"ON"
[IE-26P board]	
S1 (SKIN SET)	"NORM"
S2 (DTL ON/OFF)	"ON"
[PR-130 board]	
S1 (GAMMA)	"ON"
[MS-33 board]	
S1 (SAFETY ZONE)	"90%"
S7 (MONITOR SELECT)	"VF"
[SG-167P board]	
S1 (R ON/OFF)	"ON"
S2 (G ON/OFF)	"ON"
[AT-54 board]	
S1 (MODE)	"F"
[AU-129P board]	
S1 (PGM 1 MIX)	"OFF"
S2 (PGM 2 MIX)	"OFF"
S3 (TRK PGM)	"ON"
S4 (TRK INCOM 2)	"ON"
S10 (MIC POWER)	"OFF"
[Rear panel]	
CURSOR button	"OFF"
Video signal select button	"G"
RET 1 button	"OFF"
RET 2 button	"OFF"
FILTER LOCAL button	"ON (light up)"
ND filter select button	"1"
CC filter select button	"B"
CENTER MARKER switch	"OFF"
SAFETY ZONE switch	"OFF"
MIX VF switch	"OFF"
DISPLAY switch	"OFF"

MSU-350

- SIGNAL SELECT BLOCK

PANEL ACTIVE button	"ON (light up)"
CAM POWER button	"ON (light up)"
TEST 1 button	"OFF (lamp goes off)"
TEST 2 button	"OFF (lamp goes off)"
BARS button	"OFF (lamp goes off)"
CLOSE button	"OFF (lamp goes off)"
- MODE SELECT BLOCK

DETAIL OFF button	"OFF (light up)"
KNEE OFF button	"OFF (light up)"
AUTO KNEE button	"OFF (lamp goes off)"
MATRIX button	"OFF (lamp goes off)"
- AUTO SETUP BLOCK

LEVEL button	"OFF (lamp goes off)"
WHITE button	"OFF (lamp goes off)"
BLACK button	"OFF (lamp goes off)"
- OTHERS

GAMMA SELECT button	"0.45"
MASTER GAIN button	"0"

2. Presetting of compensation signal

- Preset (center value) all compensation signals output from the microprocessor before starting the adjustments.

If not, the adjustments will not be set correctly even if the specifications are satisfied.

1. Confirm that the OFFSET button on the MSU-350 is set to OFF (lamp goes off).
2. S1 **MODE** switch/AT-54 board → "0"
S2 **SINGLE/UP ↔ DOWN** switch/AT-54 board
→ Set to upperside (SINGLE/UP ↔ DOWN) once.
3. Adjust the MASTER BLACK knob and set the adjustment value that is displayed on the display block to "0".

5-1-4. Note on adjustment

When performing the adjustment, read the following comments.

1. All measuring equipments must be calibrated. Also the adjustment of Camera Control Unit CCU-370P must be completed.
2. "5-1-3. Initial setting" should be done before the adjustment.
3. "5-2. ADJUSTMENT ITEMS" is for overall adjustment procedures.
4. Flowcharts in "5-4. PARTIAL ADJUSTMENT" show the adjustment in order to perform the partial adjustment.
5. When adjusting the following controls, an option (SKIN DETAIL) must be set on the MSU-350.

●RV11, ●RV12, ●RV13, ●RV32/IE-26P board

Function of each controls

Hue of skin, brightness of skin and the level of skin detail can be set above controls,

Instant adjustment

Shooting object : Shoot human face to be shot for adjustment before starting actual shooting.

Switch setting

SKIN DTL/MSU-350 → "ON" (option)

S1 (SKIN SET)/IE-26P board → "SET"

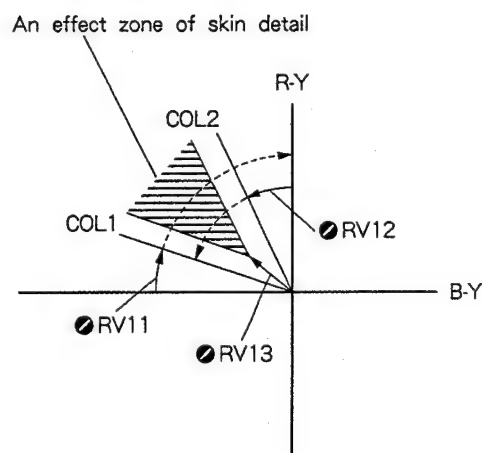
- An effect zone of skin detail in option (SKIN DETAIL) can be obtained by adjusting ●RV11 (COL 1 axis), ●RV12 (COL 2 axis), and ●RV13 (SATURATION).
- White gate signal appears on effect zone of skin detail. And then, adjust ●RV11, ●RV12, and ●RV13 observing a color monitor.
- Adjust the level of skin detail by using ●RV32.

6. When adjusting ●LV1 and ●LV2 on the FL-89 board, long TRIAX cable (600 to 1000 m) is required. Therefore, perform the adjustment only when replacing a part.

(Refer to "7-12. Return Video Frequency Adjustment (1)" and "7-13. Return Video Frequency Adjustment (2).")

7. TALLY LAMP INTENSITY ADJUSTMENT (●RV9/MS-33 board)

Usually, tally lamp intensity adjustment is not required. However, when desiring it, adjust ●RV9 to your preferred intensity.



5-2. ADJUSTMENT ITEMS

STEP 1. POWER SUPPLY SYSTEM ADJUSTMENT

- 1-1. PS-198 Board Power Supply System Adjustment

STEP 2. SYNC SIGNAL SYSTEM ADJUSTMENT

- 2-1. SG-167P Board +5V Adjustment

STEP 3. VIDEO SIGNAL SYSTEM ADJUSTMENT

- 3-1. VA-86/131A Board +5V Adjustment
- 3-2. IE-26P Board +5V Adjustment
- 3-3. PR-130 Board +5V Adjustment
- 3-4. Pedestal Pre-adjustment
- 3-5. Input DC Balance Adjustment
- 3-6. VA Gain Adjustment
- 3-7. Black Shading Pre-adjustment
- 3-8. White Shading Pre-adjustment
- 3-9. Black Set Adjustment
- 3-10. Offset Adjustment
- 3-11. V MOD Balance Adjustment
- 3-12. Test Signal Adjustment
- 3-13. Pre Knee Adjustment
- 3-14. Pedestal Adjustment
- 3-15. B-CH Out Level Adjustment
- 3-16. G-CH Out Level Adjustment
- 3-17. R-CH Out Level Adjustment
- 3-18. PR Gain Adjustment
- 3-19. Black Shading Adjustment
- 3-20. White Shading Adjustment
- 3-21. Flare Adjustment
- 3-22. Gamma Balance Adjustment
- 3-23. Gamma Correction Adjustment
- 3-24. Knee Correction Adjustment
- 3-25. White Clip Adjustment

STEP 4. DETAIL SIGNAL SYSTEM ADJUSTMENT

- 4-1. IE-26P Board +5V Confirmation
- 4-2. V DTL Null Adjustment
- 4-3. IE Frequency Response Adjustment
- 4-4. G-CH 1H Phase Adjustment
- 4-4. G-CH 1H/2H Phase Adjustment
- 4-5. R-CH 1H Phase Adjustment
- 4-7. R-CH 1H/2H Phase Adjustment
- 4-8. H DTL Balance Adjustment
- 4-9. HF/LF DTL Balance Adjustment
- 4-10. DC Offset Adjustment
- 4-11. Level Dependent Adjustment
- 4-12. Crisping Adjustment
- 4-13. DTL Limiter Adjustment
- 4-14. H/V Ratio Adjustment
- 4-15. DTL Gain Adjustment

STEP 5. AUTO CONTROL SYSTEM ADJUSTMENT

- 5-1. AT-54 Board +5V Adjustment
- 5-2. Auto Iris Adjustment
- 5-3. Character Position Adjustment
- 5-4. Window Gate Adjustment
- 5-5. CC Filter Servo Adjustment
- 5-6. ND Filter Servo Adjustment

STEP 6. VF INTERFACE SYSTEM ADJUSTMENT

- 6-1. MS-33 Board +5V Adjustment
- 6-2. Safety Zone Adjustment
- 6-3. Center Marker H Position Adjustment
- 6-4. Cursor Adjustment
- 6-5. VF R/G/B Level Adjustment
- 6-6. Return Video Level Adjustment

STEP 7. TRIAX INTERFACE SYSTEM ADJUSTMENT

- 7-1. MD-67 Board +5V Adjustment
- 7-2. FL-89 Board +9V Adjustment
- 7-3. 36 MHz Frequency Adjustment
- 7-4. Y REF Level Adjustment
- 7-5. Y Carrier Balance Adjustment
- 7-6. Y DC Balance Adjustment
- 7-7. R-Y Ref Level Adjustment
- 7-8. B-Y Ref Level Adjustment
- 7-9. R-Y/B-Y DC Balance Adjustment
- 7-10. R-Y/B-Y 90° Adjustment
- 7-11. 72 MHz TRAP Adjustment
- 7-12. Return Video Frequency Adjustment (1)
- 7-13. Return Video Frequency Adjustment (2)
- 7-14. Return Video Level Adjustment
- 7-15. RET DC Set Adjustment

STEP 8. INTERCOM SYSTEM ADJUSTMENT

- 8-1. AU-129P Board +9V Adjustment
- 8-2. Tuning Adjustment
- 8-3. Frequency Setting Adjustment
- 8-4. INCOM 1 Deviation Adjustment
- 8-5. INCOM 2 Deviation Adjustment
- 8-6. MIC 1 Deviation Adjustment
- 8-7. MIC 2 Deviation Adjustment
- 8-8. INCOM 1 Side Tone Adjustment
- 8-9. INCOM 1 Demod. Adjustment
- 8-10. INCOM 1 Level Adjustment
- 8-11. INCOM 2 Side Tone Adjustment
- 8-12. INCOM 2 Demod. Adjustment
- 8-13. INCOM 2 Level Adjustment
- 8-14. PGM Demod. Adjustment
- 8-15. PGM Level Adjustment

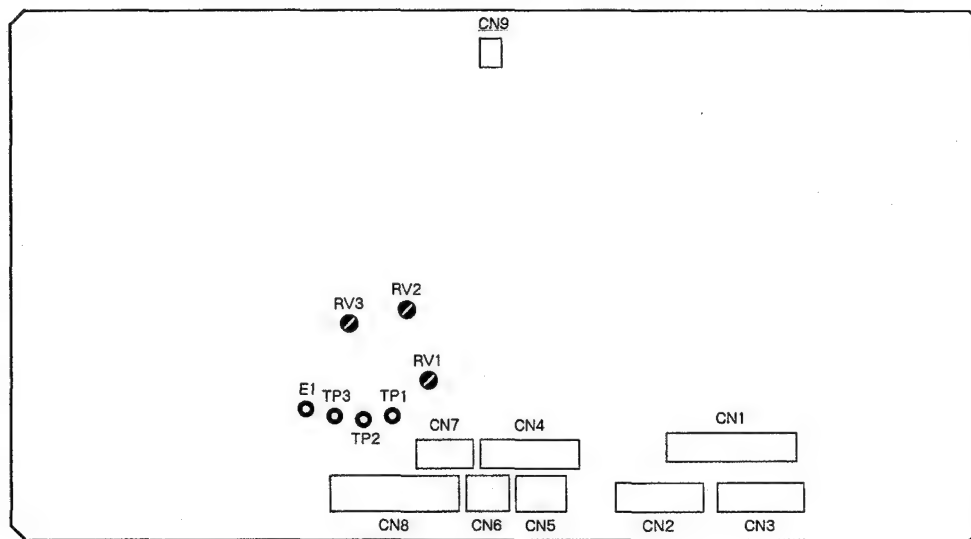
STEP 1. POWER SUPPLY SYSTEM ADJUSTMENT

1-1. PS-198 BOARD POWER SUPPLY SYSTEM ADJUSTMENT

Note: Perform the adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

Equipment: Digital voltmeter

To be extended: PS-198 board



PS-198 BOARD (COMPONENT SIDE)

Adjustment Procedures

- Perform the adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

Adj. Item	Test Point /PS-198 Board	Adj. Point /PS-198 Board	Specifications
+9.5V	TP1(GND;E1)	RV1	$+9.5 \pm 0.02\text{Vdc}$
+5.5V	TP2(GND;E1)	RV2	$+5.5 \pm 0.02\text{Vdc}$
+5.0V	TP3(GND;E1)	RV3	$+5.0 \pm 0.02\text{Vdc}$

STEP 2. SYNC SIGNAL SYSTEM ADJUSTMENT

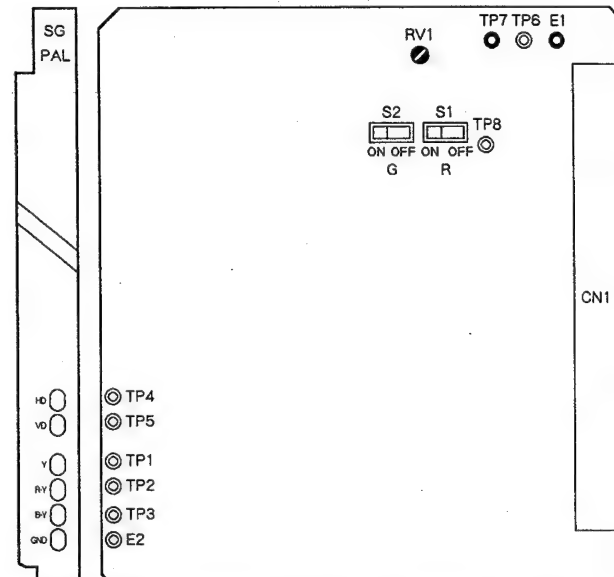
2-1. SG-167P BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the SG-167P board.
Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

Equipment: Digital voltmeter
To be extended: SG-167P board
Test point: TP7 (GND; E1)/SG-167P board
Adjusting point: RV1/SG-167P board
Specification: $+5.0 \pm 0.02$ Vdc

Adjustment Procedures

- Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.



(PANEL SIDE) SG-167P BOARD (COMPONENT SIDE)

STEP 3. VIDEO SIGNAL SYSTEM ADJUSTMENT

3-1. VA-86/131A BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the VA-86/131A board.

Therefore, when this adjustment is carried out, all of following adjustments in VIDEO SIGNAL SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

Serial No. 40001 to 42700

Equipment: Digital voltmeter
To be extended: VA-86 board
Test point: TP2 (GND; E1)/VA-86 board
Adjusting point: RV1/VA-86 board
Specification: $+5.0 \pm 0.02$ Vdc

Adjustment Procedures

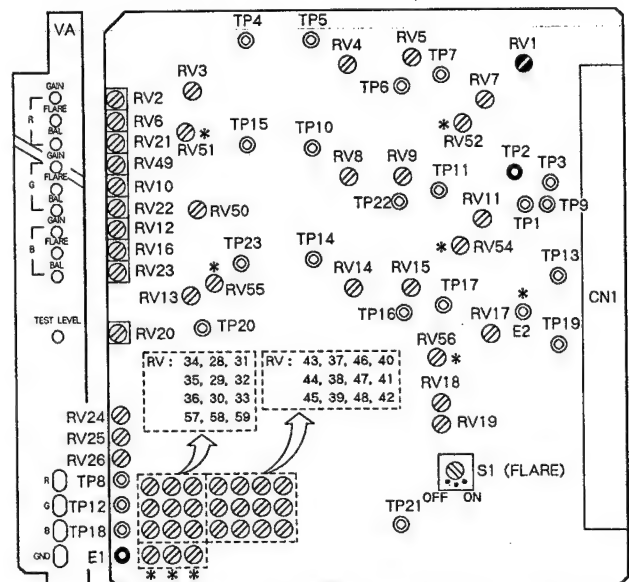
- Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

Serial No. 42701 and higher

Equipment: Digital voltmeter
To be extended: VA-131A board
Test point: TP701 (GND; E702)/VA-131A board
Adjusting point: RV701/VA-131A board
Specification: $+5.0 \pm 0.02$ Vdc

Adjustment Procedures

- Perform adjustment only when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

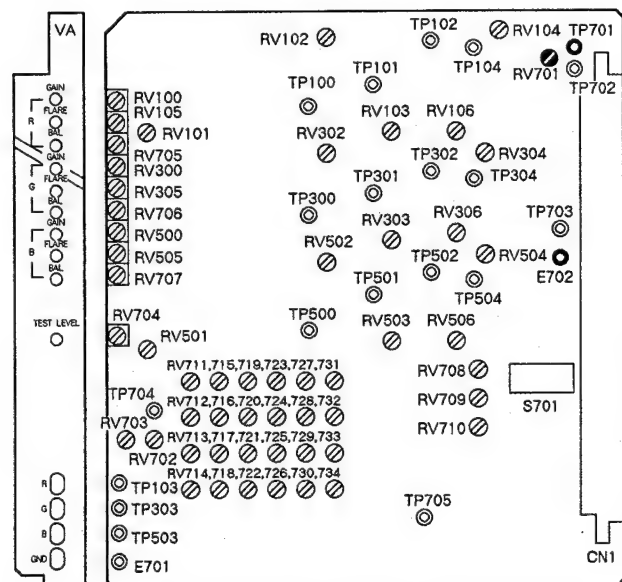


(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking "*" are mounted on the VA-86 board with a suffix of -12.

Suffix -11; Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

3-2. IE-26P BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the IE-26P board.

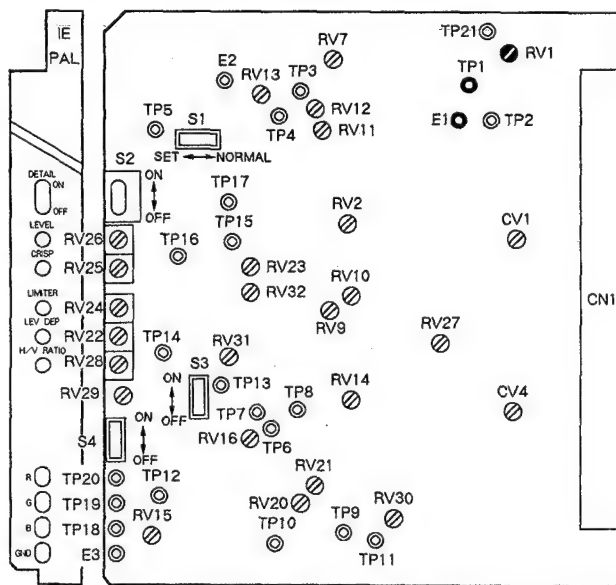
Therefore, when this adjustment is carried out, all of following adjustments in VIDEO SIGNAL SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

Equipment: Digital voltmeter
To be extended: IE-26P board
Test point: TP1 (GND; E1)/IE-26P board
Adjusting point: RV1/IE-26P board
Specification: $+5.0 \pm 0.02$ Vdc

Adjustment Procedures

- Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

3-3. PR-130 BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the PR-130 board.

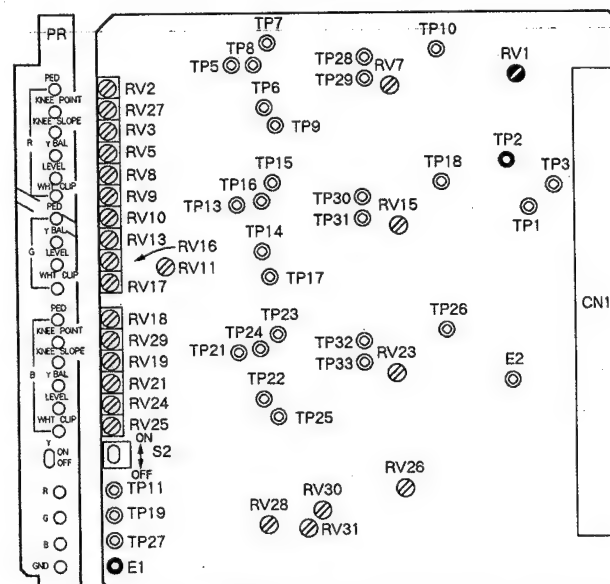
Therefore, when this adjustment is carried out, all of following adjustments in VIDEO SIGNAL SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

Equipment: Digital voltmeter
To be extended: PR-130 board
Test point: TP2 (GND; E1)/PR-130 board
Adjusting point: RV1/PR-130 board
Specification: $+5.0 \pm 0.02$ Vdc

Adjustment Procedures

- Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.



(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

3-4. PEDESTAL PRE-ADJUSTMENT

Equipment: Waveform monitor

Preparation

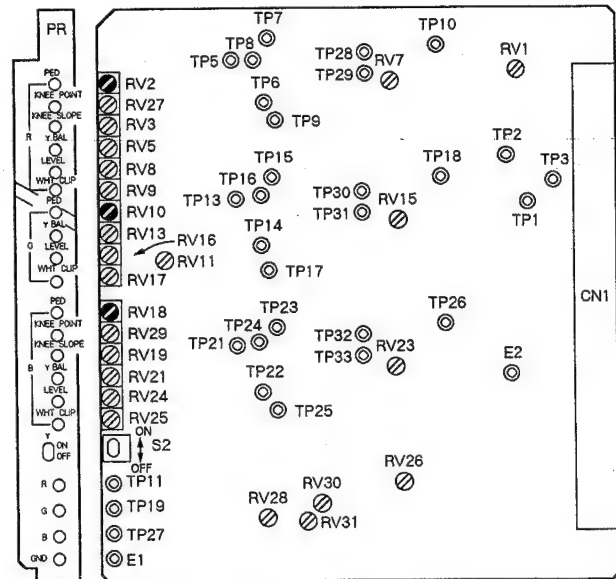
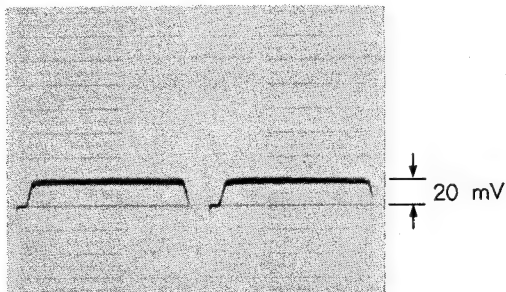
- CLOSE button/MSU-350 → "ON"
- Video signal select button/BVP-370P (rear panel) → "G"
- RESPONSE switch/waveform monitor → "LOW PASS"

Test point: MONITOR OUT connector (camera side panel)

Adjustment Procedures

1. Set the adjustment value that is displayed on the display block to "0" with MASTER BLACK control.
Make sure that the initial setting are performed so that compensation data for BLK SET, G PED, R PED and B PED are reset.
2. Perform adjustment in order of G, R and B with the video signal select button.

	Adj. Point/PR-130	Specification
G-ch	RV10 (G PED)	20 mV
R-ch	RV2 (R PED)	
B-ch	RV18 (B PED)	



(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

Serial No. 40001 to 42700

3-5. INPUT DC BALANCE ADJUSTMENT

Equipment: Oscilloscope

To be extended: VA-86 board

Preparation

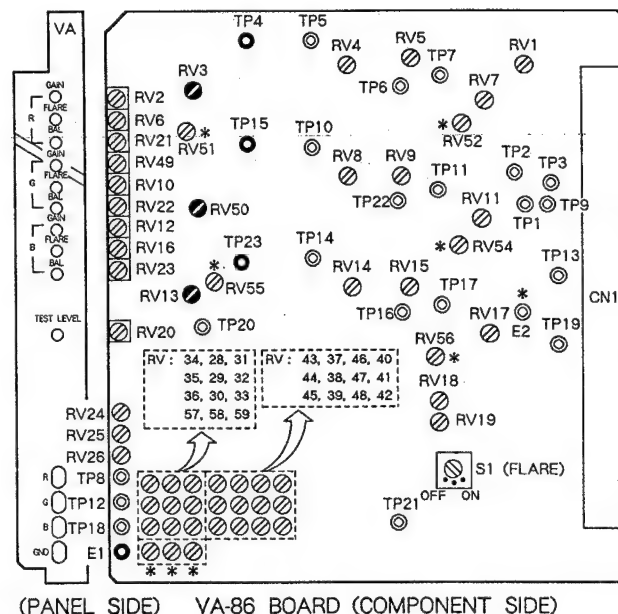
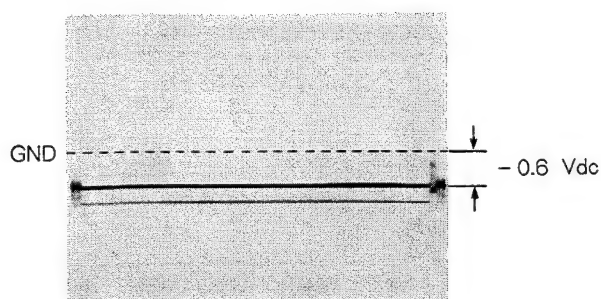
- CLOSE button/MSU-350 → "ON"

Adjustment Procedures

Adjust controls as follows.

VA-86 board (GND: E1)

	Test Point	Adj. Point	Specification
G-ch	TP15	RV50	- 0.6 Vdc
R-ch	TP4	RV3	
B-ch	TP23	RV13	



RVs identified by marking "*" are mounted on the VA-86 board with a suffix of -12.
 Suffix -11; Serial No. Up to 40300
 Suffix -12; Serial No. 40301 to 42700

3-6. VA GAIN ADJUSTMENT

Note: Use a white pattern chart for this adjustment. Adjust the lighting so that the white area is exactly 3200K of color temperature. Ensure that the chart is lit to 2000 lux and is 89.9% reflectance. When the pattern box is used, well maintained pattern box should be used.

Object: White window chart
Equipment: Oscilloscope
To be extended: VA-86/131A board

Monitor Screen



Lens zoom: Adjust the zoom control of the lens so that the white portion of the white window chart fully occupies the monitor screen.

Lens iris: Set the IRIS control/MSU-350 to F5.6.
 (Serial No.: Up to 40300)
 Set the IRIS control/MSU-350 to F8.0
 (Serial No.: 40301 and higher)

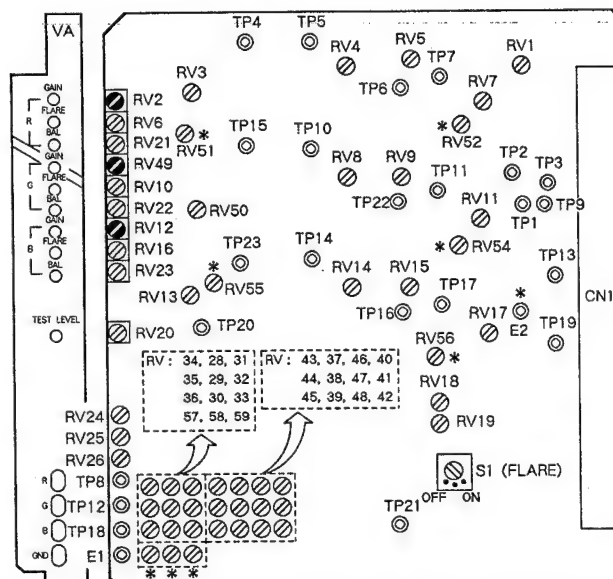
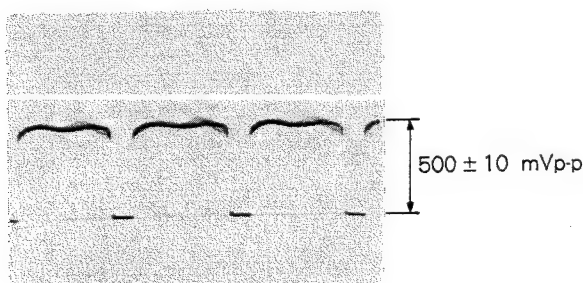
Adjustment Procedures

Serial No. 40001 to 42700

	Test Point /Extension board	Adj. point /VA-86 board	Spec.
G-ch	TPA20 (GND:E1)	RV49 (G GAIN)	500 ± 10 mVp-p
R-ch	TPA14 (GND:E1)	RV2 (R GAIN)	
B-ch	TPA26 (GND:E1)	RV12 (B GAIN)	

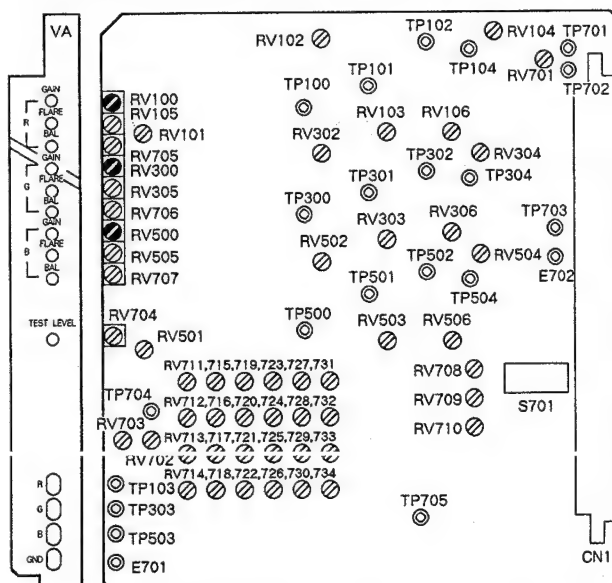
Serial No. 42701 and higher

	Test Point /Extension board	Adj. point /VA-131A board	Spec.
G-ch	TPA20 (GND:E1)	RV300 (G GAIN)	500 ± 10 mVp-p
R-ch	TPA14 (GND:E1)	RV100 (R GAIN)	
B-ch	TPA26 (GND:E1)	RV500 (B GAIN)	



(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

● RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12.
 Suffix -11; Serial No. Up to 40300
 Suffix -12; Serial No. 40301 to 42700



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

3-7. BLACK SHADING PRE-ADJUSTMENT

Equipment: Waveform monitor

To be extended: VA-86/131A board

Preparation

- CLOSE button/MSU-350 → "ON"
- MASTER GAIN select button/MSU-350 → "+9"
- Video Signal Select button/BVP-370P (rear panel) → "G"
- RESPONSE switch/waveform monitor → "LOW PASS"

Test point: MONITOR OUT connector (camera side panel)

Adjustment Procedures

- Perform adjustment in order of G, R and B with the video signal select button.

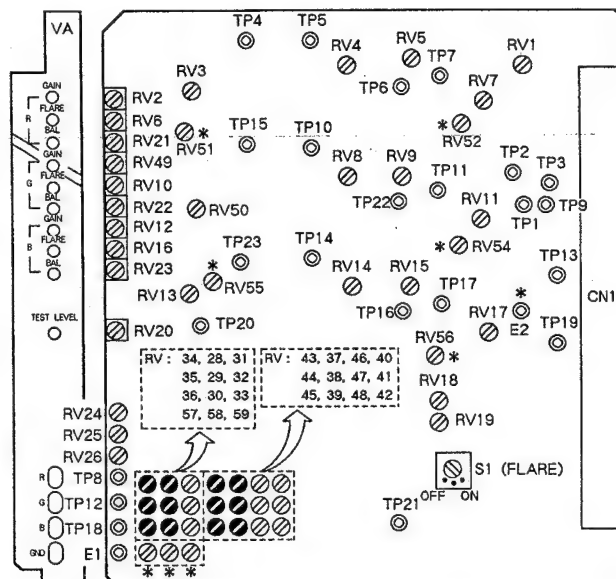
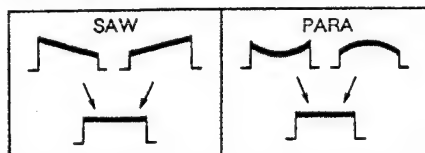
Serial No. 40001 to 42700 (VA-86 board)

	BLK H SAW	BLK H PARA	BLK V SAW	BLK V PARA
G-ch	RV29	RV35	RV38	RV44
R-ch	RV28	RV34	RV37	RV43
B-ch	RV30	RV36	RV39	RV45

Serial No. 42701 and higher (VA-131A board)

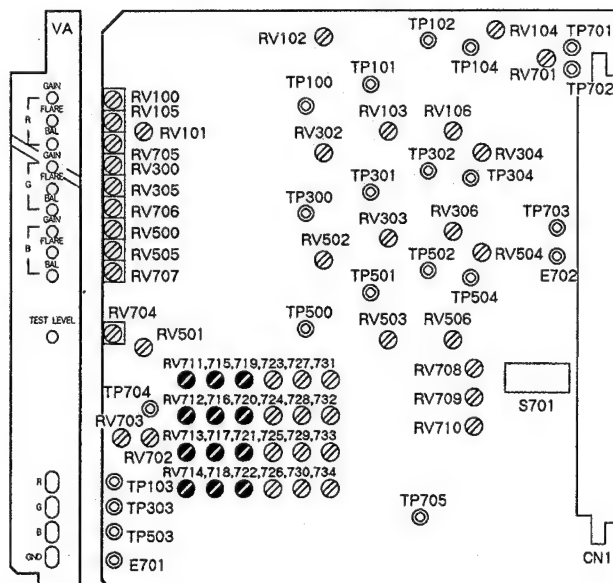
	BLK H SAW	BLK H PARA	BLK V SAW	BLK V PARA
G-ch	RV715	RV716	RV717	RV718
R-ch	RV711	RV712	RV713	RV714
B-ch	RV719	RV720	RV721	RV722

Adjust the waveform for flat



(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking "*" are mounted on the VA-86 board with a suffix of -12.
 Suffix -11; Serial No. Up to 40300
 Suffix -12; Serial No. 40301 to 42700



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

Note: After the adjustment, set button as follows.
 MASTER GAIN select button/MSU-350 → "0"

3-8. WHITE SHADING PRE-ADJUSTMENT

Equipment: Waveform monitor

To be extended: VA-86/131A board

Preparation

- GAMMA SELECT (OFF) button/MSU-350 → light up
- Video Signal Select button/BVP-370P (rear panel) → "G"

Object: White window chart

Lens zoom: Adjust the zoom control of the lens so that the white portion of the white window chart fully occupies the monitor screen.

Lens iris: Adjust the iris control so that the video level at MONITOR OUT connector (camera side panel) is 650 ± 10 mV.

Test point: MONITOR OUT connector (camera side panel)

Adjustment Procedures

- Perform adjustment in order of G, R and B with the video signal select button.

Serial No. Up to 40300 (VA-86 board)

	WHT H SAW	WHT V SAW	WHT V PARA
G-ch	RV32	RV41	RV47
R-ch	RV31	RV40	RV46
B-ch	RV33	RV42	RV48

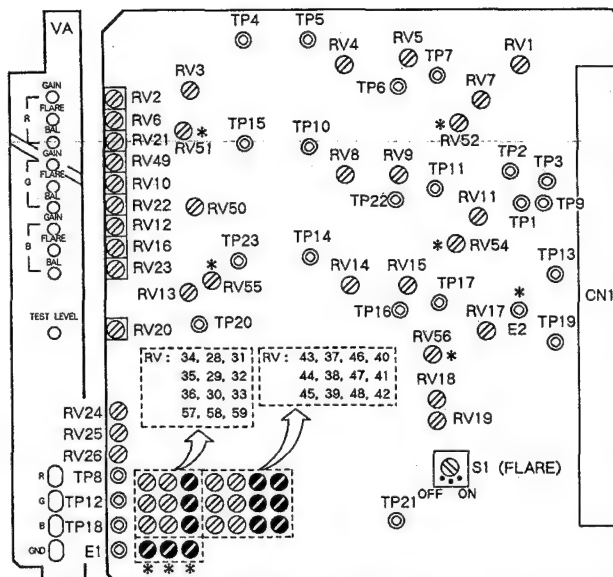
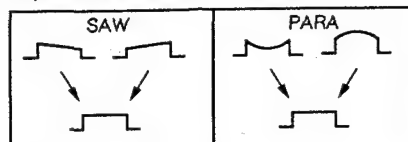
Serial No. 40301 to 42700 (VA-86 board)

	WHT H SAW	WHT H PARA	WHT V SAW	WHT V PARA
G-ch	RV32	RV58	RV41	RV47
R-ch	RV31	RV57	RV40	RV46
B-ch	RV33	RV59	RV42	RV48

Serial No. 42701 and higher (VA-131A board)

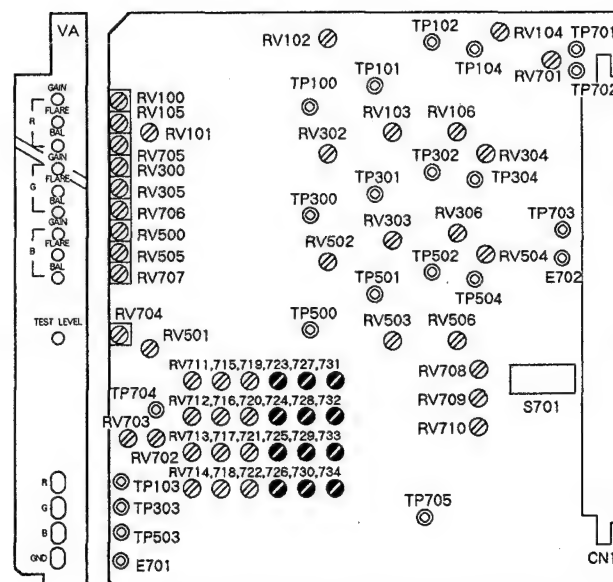
	WHT H SAW	WHT H PARA	WHT V SAW	WHT V PARA
G-ch	RV727	RV728	RV729	RV730
R-ch	RV723	RV724	RV725	RV726
B-ch	RV731	RV732	RV733	RV734

Adjust the waveform for flat



(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12.
Suffix -11; Serial No. Up to 40300
Suffix -12; Serial No. 40301 to 42700



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

Note: After the adjustment, set button as follows.
GAMMA SELECT (OFF) button/MSU-350 → lamp goes off
GAMMA SELECT (0.45) button/MSU-350 → light up



Serial No. 40001 to 42700

3-9. BLACK SET ADJUSTMENT

Equipment: Waveform monitor

To be extended: VA-86 board

Preparation

- CLOSE button/MSU-350 → "ON"
- RESPONSE switch/Waveform monitor → "LOW PASS"

Test point: MONITOR OUT connector (camera side panel)

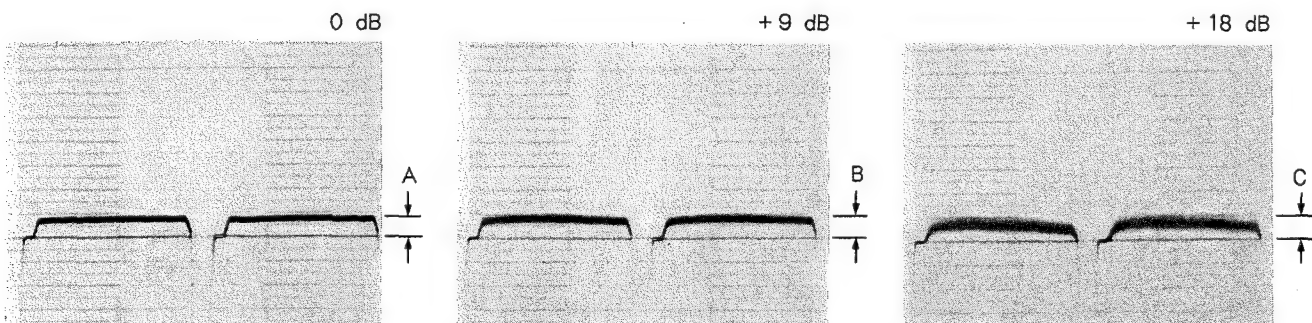
Adjustment Procedures

1. Adjust the MASTER BLACK control/MSU-350 so that the black level at test point is 140 mV.
2. Perform adjustment in order of G, R and B with video signal select button.

	Video Signal Select Button	Adj. Point /VA-86 Board	MASTER GAIN Select Button
G-ch	"G"	RV22	0(0dB) ↔ 9(+9dB)
		RV25	0(0dB) ↔ 18(+18dB)
R-ch	"R"	RV21	0(0dB) ↔ 9(+9dB)
		RV24	0(0dB) ↔ 18(+18dB)
B-ch	"B"	RV23	0(0dB) ↔ 9(+9dB)
		RV26	0(0dB) ↔ 18(+18dB)

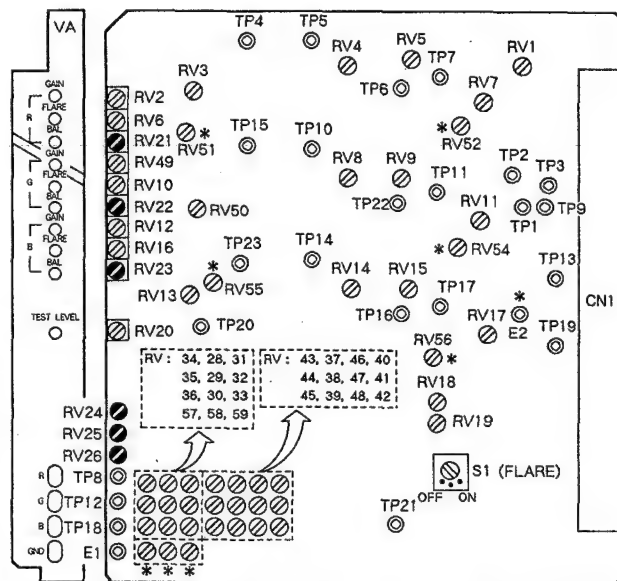
Specifications: Adjust the controls so that the black level does not change even when the MASTER GAIN select button is switched according to the above table.

$$A = B = C$$



3. Set adjustment value that is displayed on the display block to "0" with MASTER BLACK control/MSU-350.

Note: After the adjustment, set button as follows.
MASTER GAIN select button → "0 (0 dB)"



(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking "*" are mounted on the VA-86 board with a suffix of -12.
Suffix -11; Serial No. Up to 40300
Suffix -12; Serial No. 40301 to 42700

Serial No. 42701 and higher

3-9. BLACK SET ADJUSTMENT

Equipment: Waveform monitor

To be extended: VA-131A board

Preparation

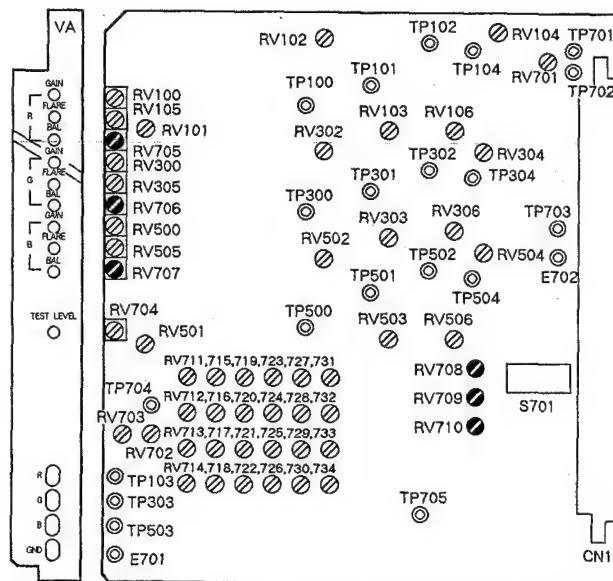
- CLOSE button/MSU-350 → "ON"
- RESPONSE switch/Waveform monitor → "LOW PASS"

Test point: MONITOR OUT connector (camera side panel)

Adjustment Procedures

1. Adjust the MASTER BLACK control/MSU-350 so that the black level at test point is 140 mV.
2. Perform adjustment in order of G, R and B with video signal select button.

	Video Signal Select Button	Adj. Point /VA-131A Board	MASTER GAIN Select Button
G-ch	"G"	RV706	0(0dB) ↔ 9(+9dB)
		RV709	0(0dB) ↔
R-ch	"R"	RV705	0(0dB) ↔ 9(+9dB)
		RV708	0(0dB) ↔
B-ch	"B"	RV707	0(0dB) ↔ 9(+9dB)
		RV710	0(0dB) ↔



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

Specifications: Adjust the controls so that the black level does not change even when the MASTER GAIN select button is switched according to the above table.

$$A = B = C$$

0 dB

+ 9 dB

+ 18 dB



3. Set adjustment value that is displayed on the display block to "0" with MASTER BLACK control/MSU-350.

Note: After the adjustment, set button as follows.
MASTER GAIN select button → "0 (0 dB)"

3-10. OFFSET ADJUSTMENT

Equipment: Waveform monitor

To be extended: VA-86/131A board

Preparation

- CLOSE button/MSU-350→“ON”
- WHITE button (control item select button)/MSU-350
→“ON”
- MASTER GAIN select button/MSU-350→“0”
- Set the Waveform monitor as follows.

DISPLAY mode	: “2 FIELD”(V period)
VOLTS FULL SCALE mode	: “0.2”

Test point: MONITOR OUT connector
(camera side panel)

Adjusting point

Serial No. 40001 to 42700

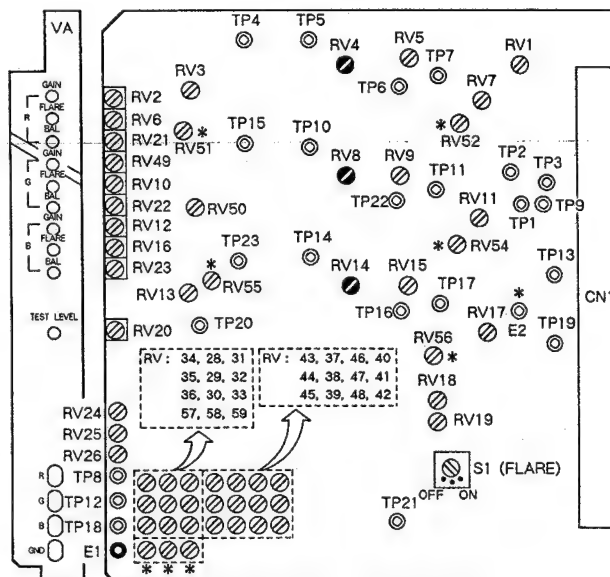
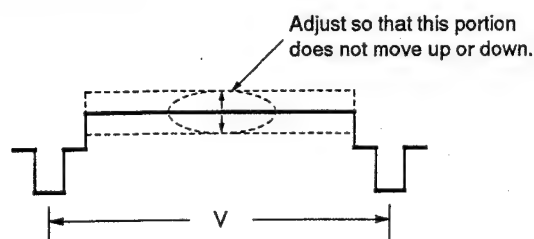
	Adj. point/VA-86 board (GND;E1)
G-ch	RV8
R-ch	RV4
B-ch	RV14

Serial No. 42701 and higher

	Adj. point/VA-131A board
G-ch	● RV302
R-ch	● RV102
B-ch	● RV502

Adjustment Procedures

1. Video signal select button/BVP-370P (rear panel) → "G"
2. Adjust the following RV control so that the center portion of level of V period does not move up or down when turning the control knob on the MSU-350 to fully clockwise or fully counterclockwise.
 - ⦿ RV8/VA-86 board (Serial No. 40001 to 42700)
 - ⦿ RV302/VA-131A board (Serial No. 42701 and higher)
3. Perform the adjustment R-ch and B-ch in the same manners 1 and 2.

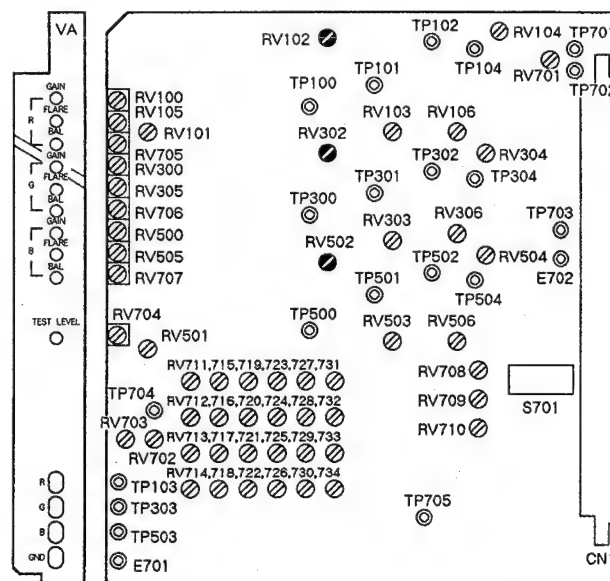


(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

● RVs identified by marking “ * ” are mounted on the VA-86 board with a suffix of -12.

Suffix -11: Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

Note: After the adjustment, set all adjustment value that is displayed on the display block to "0" with control knobs.



Serial No. 40001 to 42700

3-11. V MOD BALANCE ADJUSTMENT

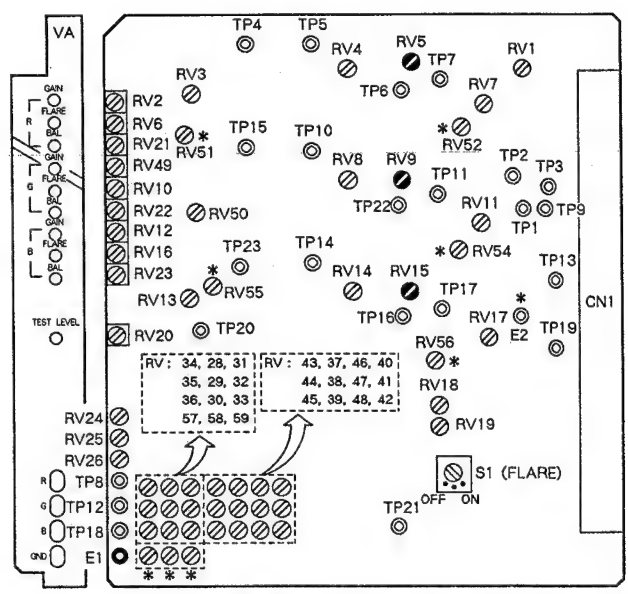
Equipment: Waveform monitor
To be extended: VA-86 board
Preparation
 • CLOSE button/MSU-350 → "ON"
 • V MOD button/MSU-350 → "ON"
 • MASTER GAIN select button/MSU-350 → "0"
Test point: MONITOR OUT connector (camera side panel)

Adjustment Procedures

VA-86 board (GND;E1)

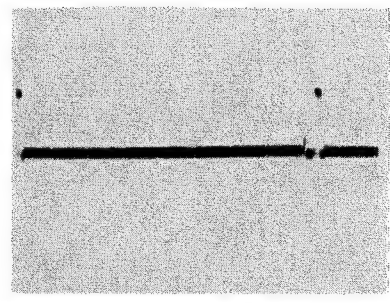
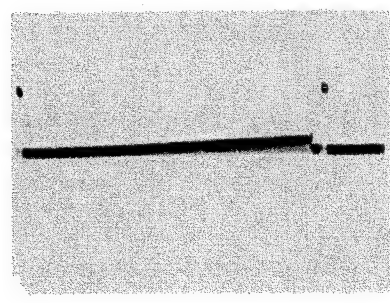
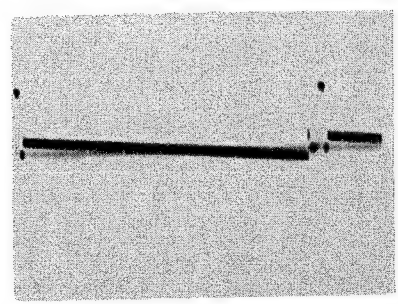
	Video signal select button /BVP-370P (rear panel)	Adj. point
G-ch	G	RV9
R-ch	R	RV5
B-ch	B	RV15

Specification: Adjust above controls so that the waveform does not change even if the control knob on the MSU-350 is turned fully clockwise or counterclockwise.



(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12.
 Suffix -11; Serial No. Up to 40300
 Suffix -12; Serial No. 40301 to 42700



Note: After the adjustment, set knobs and button as follows.
 • Set all adjustment value that is displayed on the display block to "0" with control knobs.
 • V MOD button/MSU-350 → "OFF"

Serial No. 42701 and higher

3-11. V MOD BALANCE ADJUSTMENT

Equipment: Waveform monitor

To be extended: VA-131A board

Preparation

- CLOSE button/MSU-350 → "ON"
- V MOD button/MSU-350 → "ON"
- MASTER GAIN select button/MSU-350 → "0"

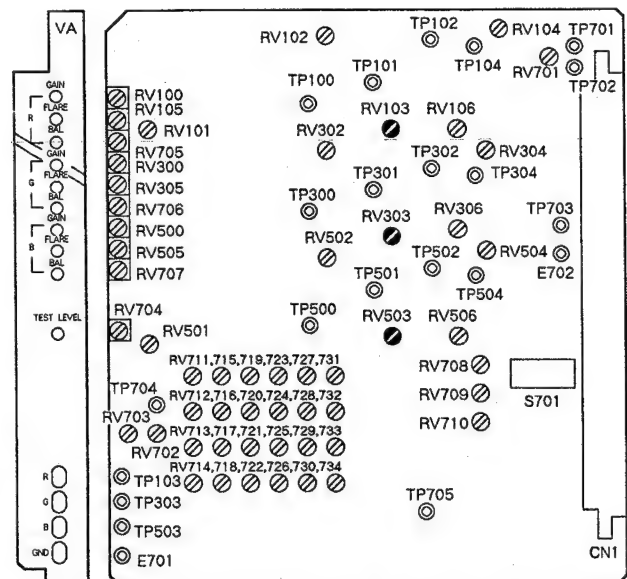
Test point: MONITOR OUT connector
(camera side panel)

Adjustment Procedures

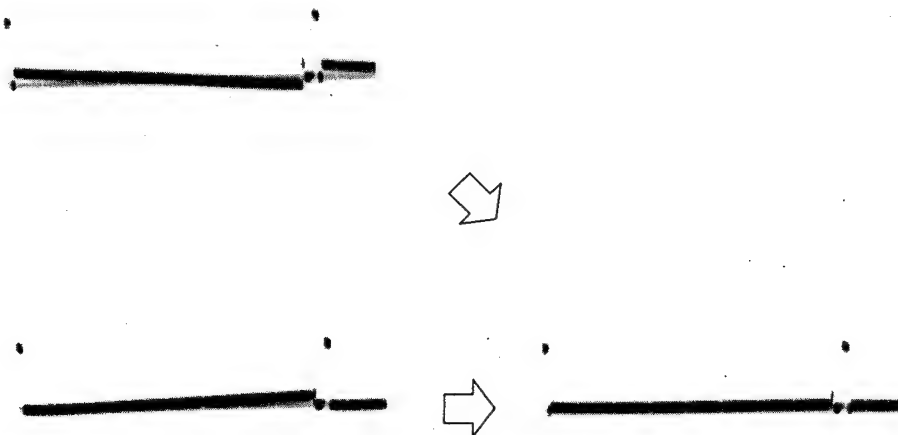
VA-131A board

	Video signal select button /BVP-370P (rear panel)	Adj. point
G-ch	G	RV303
R-ch	R	RV103
B-ch	B	RV503

Specification: Adjust above controls so that the waveform does not change even if the control knob on the MSU-350 is turned fully clockwise or counterclockwise.



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)



Note: After the adjustment, set knobs and button as follows.

- Set all adjustment value that is displayed on the display block to "0" with control knobs.
- V MOD button/MSU-350 → "OFF"

3-12. TEST SIGNAL ADJUSTMENT

Equipment: Oscilloscope

To be extended: VA-86 board

Preparation

- MASTER GAIN select button/MSU-350 → "0"

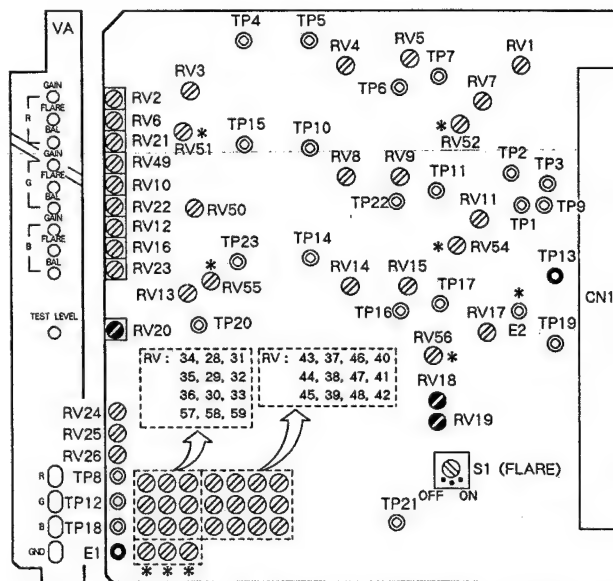
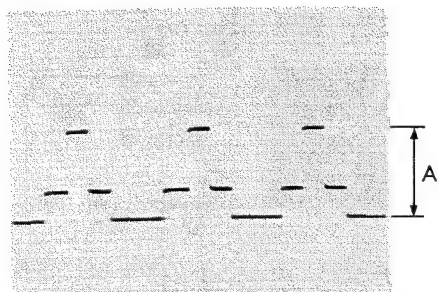
Test point: TP13 (GND; E1)/VA-86 board

Adjustment Procedures

1. TEST 2 button/MSU-350 → "ON"

2. Adjusting point: RV20/VA-86 board

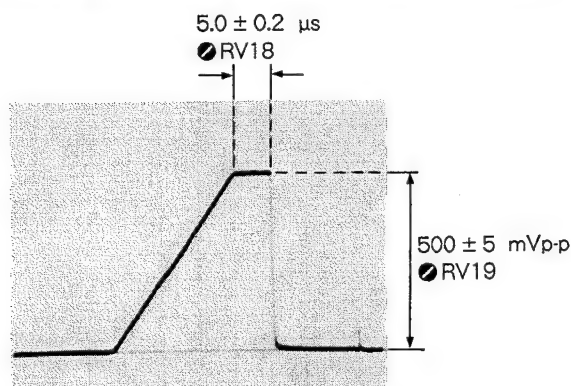
Specification: $A=500 \pm 5$ mVp-p



(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

3. TEST 1 button/MSU-350 → "ON"

4. Adjust \odot RV18 and \odot RV19/VA-86 board as follows.



● RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12.

Suffix -11; Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700

Note: After the adjustment, set button as follows.
TEST 1 button/MSU-350 → "OFF"

Serial No. 40301 to 42700

3-12. TEST SIGNAL ADJUSTMENT

Equipment: Oscilloscope

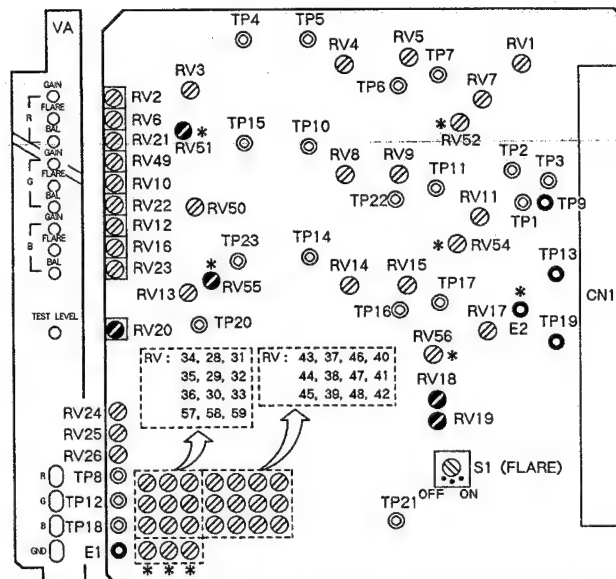
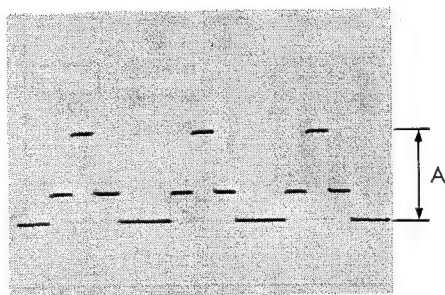
To be extended: VA-86 board

Preparation

- MASTER GAIN select button/MSU-350 → "0"

Adjustment Procedures

1. TEST 2 button/MSU-350 → "ON"
2. Test point: TP13 (GND; E1)/VA-86 board
Adjusting point: RV20/VA-86 board
Specification: $A = 500 \pm 5$ mVp-p



(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

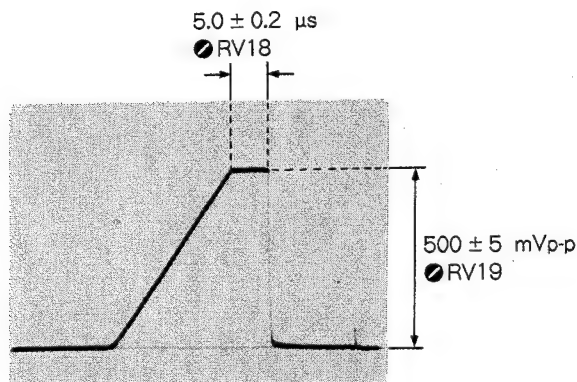
3. Perform adjustment in order of R-ch and B-ch as follows.

VA-86 board (GND;E2)

	Test point	Adj. point	Specification
R-ch	TP9	RV51	Level "A"
B-ch	TP19	RV55	

RVs identified by marking "*" are mounted on the VA-86 board with a suffix of -12.
Suffix -11; Serial No. Up to 40300
Suffix -12; Serial No. 40301 to 42700

4. TEST 1 button/MSU-350 → "ON"
5. Test point: TP13 (GND; E1)/VA-86 board
Adjust RV18 and RV19/VA-86 board as follows.



Note: After the adjustment, set button as follows.
TEST 1 button/MSU-350 → "OFF"

Serial No. 42701 and higher

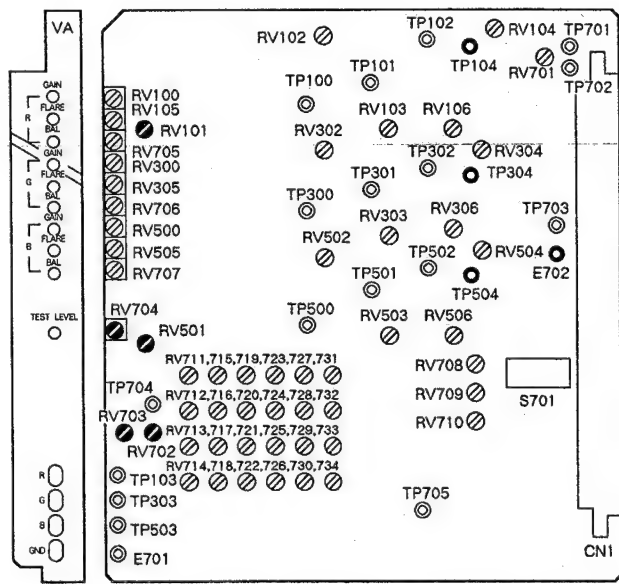
3-12. TEST SIGNAL ADJUSTMENT

Equipment: Oscilloscope
To be extended: VA-131A board

Preparation
 • MASTER GAIN select button/MSU-350 → "0"

Adjustment Procedures

1. TEST 2 button/MSU-350 → "ON"
2. Test point: TP304 (GND; E702)/VA-131A board
 Adjusting point: RV704/VA-131A board
 Specification: $A = 500 \pm 5 \text{ mVp-p}$



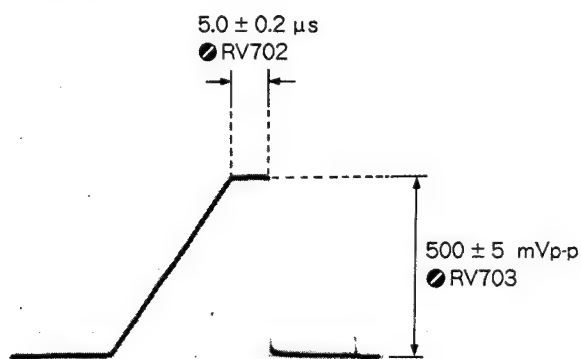
(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

3. Perform adjustment in order of R-ch and B-ch as follows.

VA-131A board (GND; E702)

	Test point	Adj. point	Specification
R-ch	TP104	RV101	Level "A"
B-ch	TP504	RV501	

4. TEST 1 button/MSU-350 → "ON"
5. Test point: TP304 (GND; E702)/VA-131A board
 Adjust RV702 and RV703/VA-131A board as follows.



Note: After the adjustment, set button as follows.
 TEST 1 button/MSU-350 → "OFF"

Serial No. 40001 to 42700

3-13. PRE KNEE ADJUSTMENT

Equipment: Oscilloscope
To be extended: VA-86 board

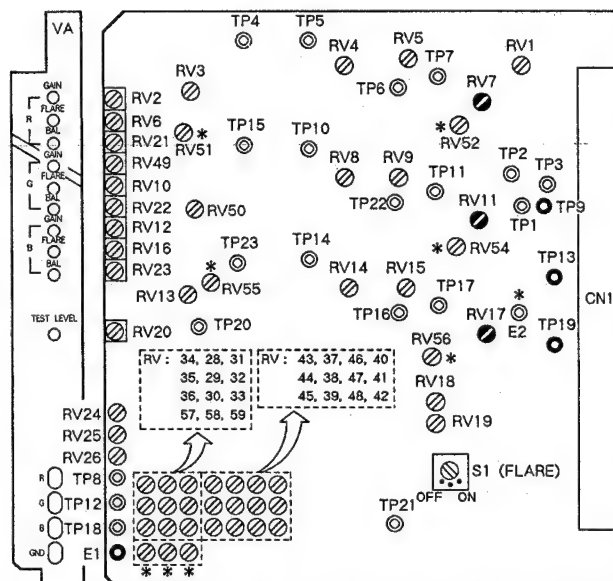
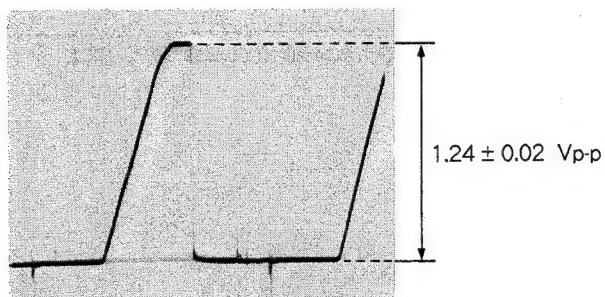
Preparation

- TEST 1 button/MSU-350 → "ON"
- MASTER GAIN select button/MSU-350 → "9"

Adjustment Procedures

Adjust RV11, RV7 and RV17 as follows.

	Test Point VA-86 Board	Adj. point VA-86 board	Spec.
G-ch	TP13 (GND;E1)	RV11	1.24 ± 0.02 Vp-p
R-ch	TP9 (GND;E1)	RV7	
B-ch	TP19 (GND;E1)	RV17	



(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking "*" are mounted on the VA-86 board with a suffix of -12.
 Suffix -11; Serial No. Up to 40300
 Suffix -12; Serial No. 40301 to 42700

Note: After the adjustment, set buttons as follows.
 TEST 1 button/MSU-350 → "OFF"
 MASTER GAIN select button/MSU-350 → "0"

3-14. PEDESTAL ADJUSTMENT

Equipment: Waveform monitor

Preparation

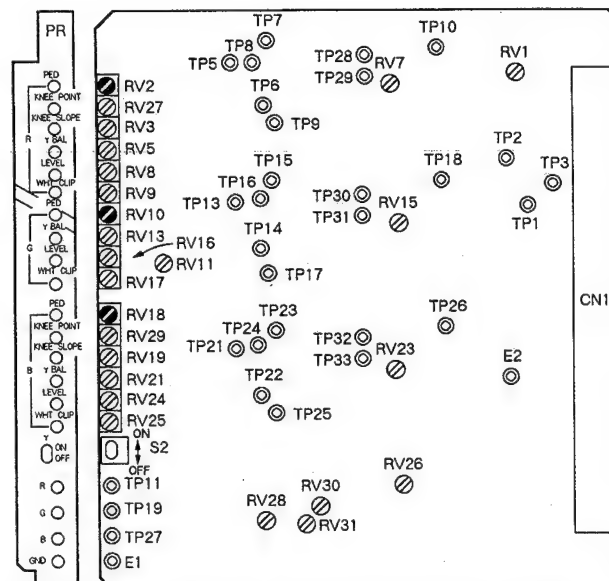
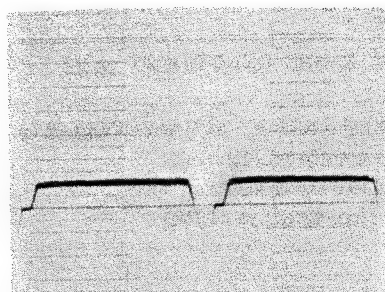
- CLOSE button/MSU-350 → "ON"
- Video signal select button/BVP-370P (rear panel) → "G"
- RESPONSE switch/Waveform monitor → "LOW PASS"

Test point: MONITOR OUT connector
(camera side panel)

Adjustment Procedures

1. Set the adjustment value that is displayed on the display block to "0" with MASTER BLACK control.
2. Perform adjustment in order of G, R and B with the video signal select button.

	Adj. Point/PR-130	Specification
G-ch	RV10 (G PED)	20 mV
R-ch	RV2 (R PED)	
B-ch	RV18 (B PED)	



(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

3-15. B-CH OUT LEVEL ADJUSTMENT

Equipment: Oscilloscope

To be extended: IE-26P board

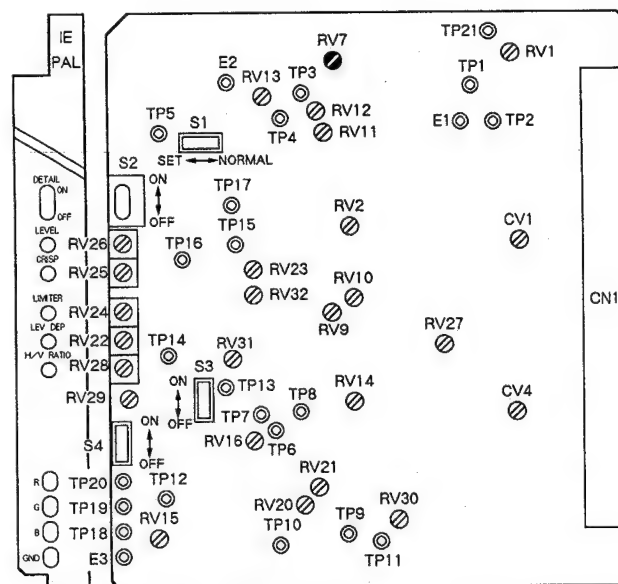
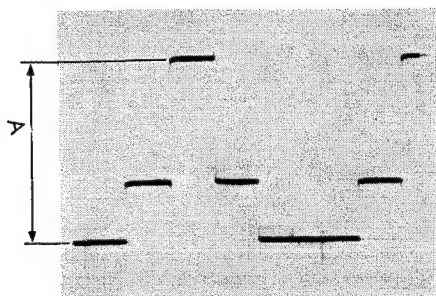
Preparation

- TEST 2 button/MSU-350 → "ON"

Adjusting point: ● RV7/IE-26P board

Adjustment Procedures

- Measure peak signal level at IE B-channel input TPA23 (GND;E1)/extension board and adjust ● RV7/IE-26P to give the same level at B-channel output TPA26 (GND;E1).



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

3-16. G-CH OUT LEVEL ADJUSTMENT

Equipment: Oscilloscope

To be extended: IE-26P board

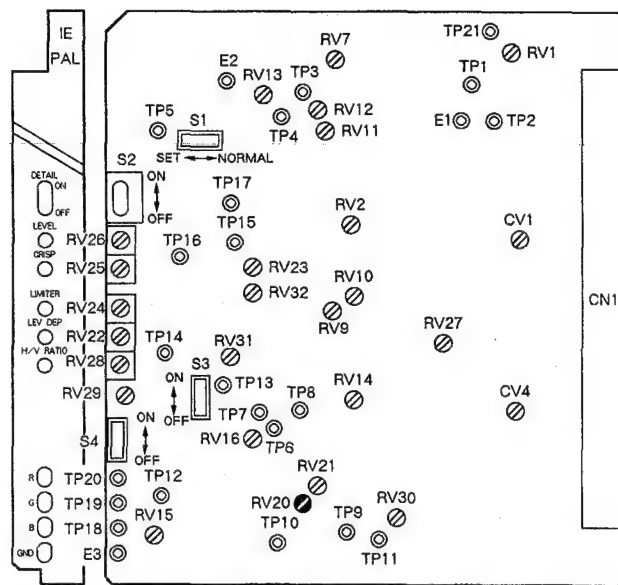
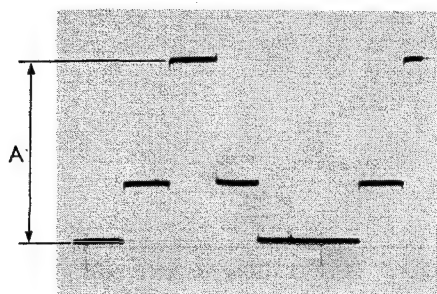
Preparation

- TEST 2 button/MSU-350 → "ON"

Adjusting point: ● RV20/IE-26P board

Adjustment Procedures

- Measure peak signal level at IE G-channel input TPA17 (GND;E1)/extension board and adjust ● RV20/IE-26P to give the same level at G-channel output TPA20 (GND;E1).



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

3-17. R-CH OUT LEVEL ADJUSTMENT

Equipment: Oscilloscope

To be extended: IE-26P board

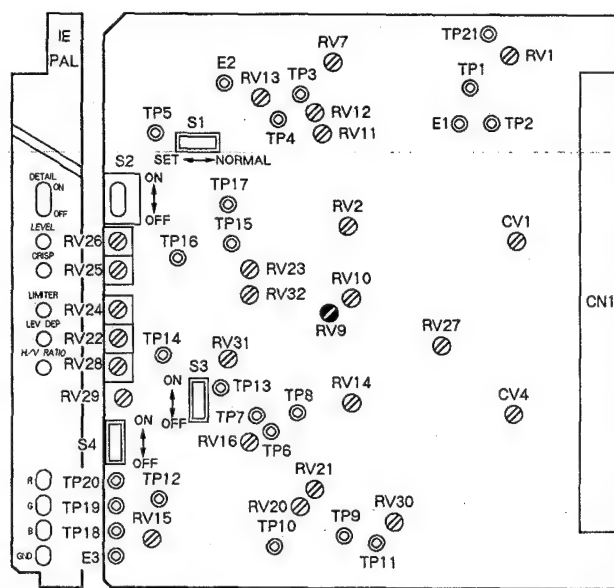
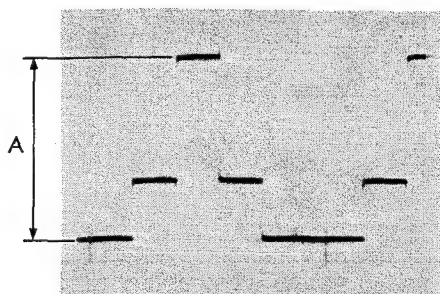
Preparation

- TEST 2 button/MSU-350 → "ON"

Adjusting point: ●RV9/IE-26P board

Adjustment Procedures

- Measure peak signal level at IE R-channel input TPA11 (GND;E1)/extension board and adjust ●RV9/IE-26P to give the same level at R-channel output TPA14 (GND;E1).



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

3-18. PR GAIN ADJUSTMENT

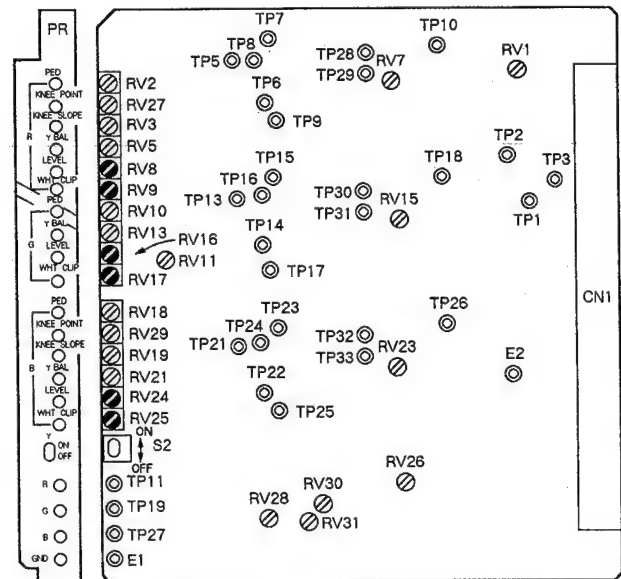
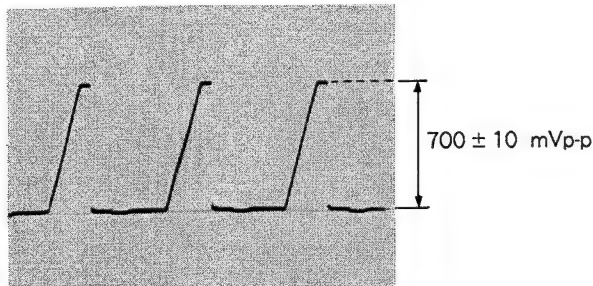
Equipment: Oscilloscope
To be extended: PR-130 board

Preparation

- TEST 1 button/MSU-350 → "ON"
- KNEE OFF button/MSU-350 → light up
- \odot RV17 (G WHT CLIP) } /PR-130 board
 \odot RV9 (R WHT CLIP) } → fully counterclockwise \odot
 \odot RV25 (B WHT CLIP)

Adjustment Procedures

	Test Point /Extension board	Adj. Point/ PR-130	Specification
G-ch	TPA20 (GND;E1)	\odot RV16 (G GAIN)	700 ± 10 mVp-p
R-ch	TPA14 (GND;E1)	\odot RV8 (R GAIN)	
B-ch	TPA26 (GND;E1)	\odot RV24 (B GAIN)	



(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

Note: After the adjustment, set button as follows.

Test 1 button/MSU-350 → "OFF"

After "3-13. PR Gain Adjustment", perform "3-21. White Clip Adjustment", if adjustment of step 3-14 through 3-20 is not necessary.

3-19. BLACK SHADING ADJUSTMENT

Equipment: Waveform monitor

To be extended: VA-86/131A board

Preparation

- CLOSE button/MSU-350 → "ON"
- MASTER GAIN select button/MSU-350 → "+9"
- Video Signal Select button/BVP-370P (rear panel) → "G"
- RESPONSE switch/waveform monitor → "LOW PASS"

Test point: MONITOR OUT connector (camera side panel)

Adjustment Procedures

- Perform adjustment in order of G, R and B with the video signal select button.

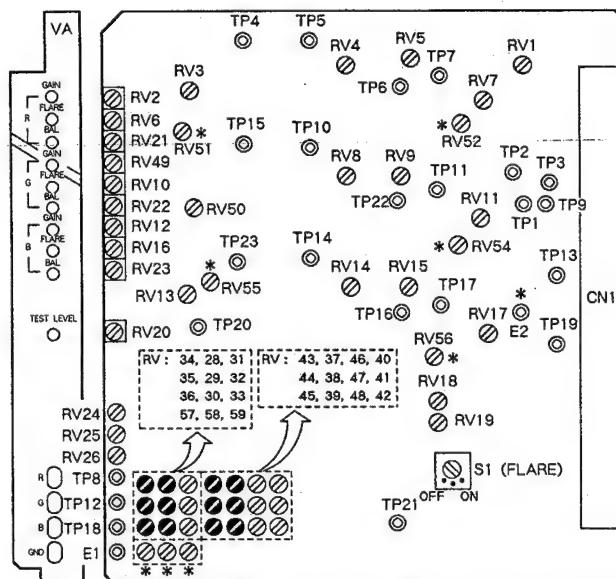
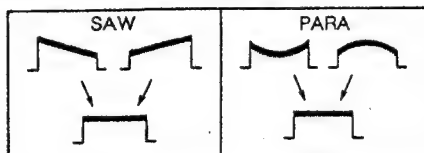
Serial No. 40001 to 42700 (VA-86 board)

	BLK H SAW	BLK H PARA	BLK V SAW	BLK V PARA
G-ch	RV29	RV35	RV38	RV44
R-ch	RV28	RV34	RV37	RV43
B-ch	RV30	RV36	RV39	RV45

Serial No. 42701 and higher (VA-131A board)

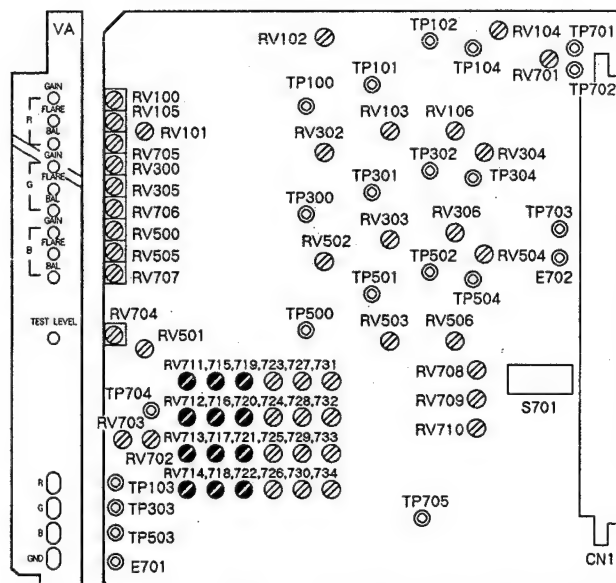
	BLK H SAW	BLK H PARA	BLK V SAW	BLK V PARA
G-ch	RV715	RV716	RV717	RV718
R-ch	RV711	RV712	RV713	RV714
B-ch	RV719	RV720	RV721	RV722

Adjust the waveform for flat



(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking "*" are mounted on the VA-86 board with a suffix of -12.
 Suffix -11; Serial No. Up to 40300
 Suffix -12; Serial No. 40301 to 42700



3-20. WHITE SHADING ADJUSTMENT

Equipment: Waveform monitor

To be extended: VA-86/131A board

Preparation

- GAMMA SELECT (OFF) button/MSU-350 → light up
- Video Signal Select button/BVP-370P (rear panel) → "G"

Object: White window chart

Lens zoom: Adjust the zoom control of the lens so that the white portion of the white window chart fully occupies the monitor screen.

Lens iris: Adjust the iris control so that the video level at MONITOR OUT connector (camera side panel) is 650 ± 10 mV.

Test point: MONITOR OUT connector (camera side panel)

Adjustment Procedures

- Perform adjustment in order of G, R and B with the video signal select button.

Serial No. Up to 40300 (VA-86 board)

	WHT H SAW	WHT V SAW	WHT V PARA
G-ch	RV32	RV41	RV47
R-ch	RV31	RV40	RV46
B-ch	RV33	RV42	RV48

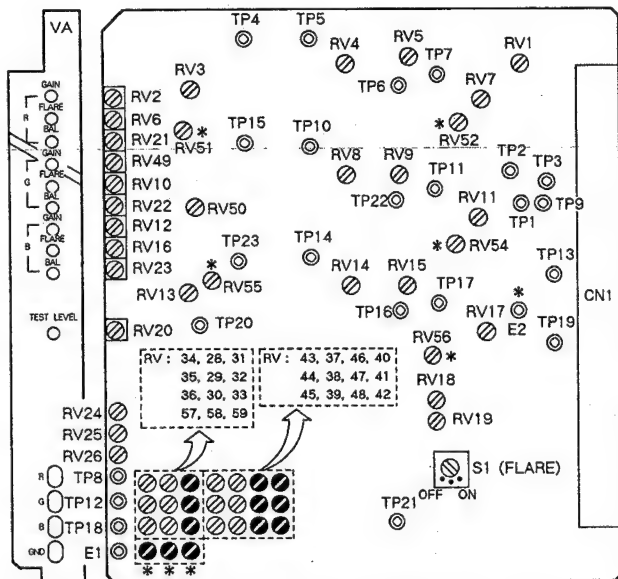
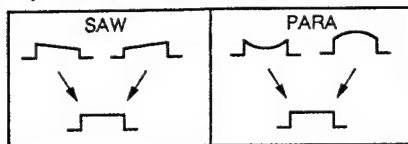
Serial No. 40301 to 42700 (VA-86 board)

	WHT H SAW	WHT H PARA	WHT V SAW	WHT V PARA
G-ch	RV32	RV58	RV41	RV47
R-ch	RV31	RV57	RV40	RV46
B-ch	RV33	RV59	RV42	RV48

Serial No. 42701 and higher (VA-131A board)

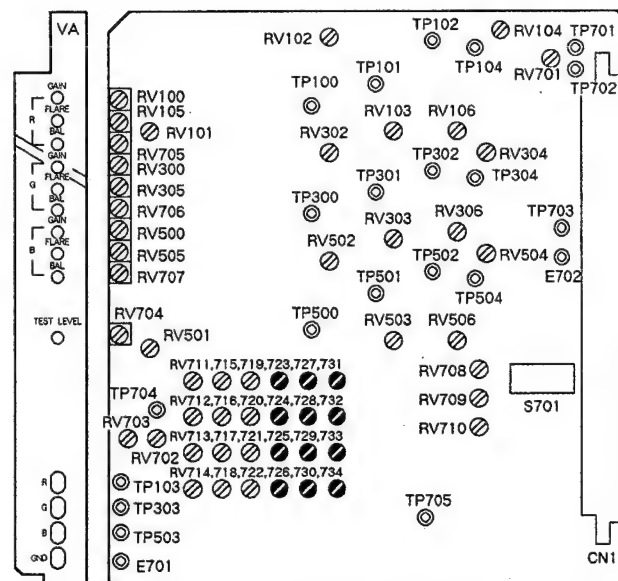
	WHT H SAW	WHT H PARA	WHT V SAW	WHT V PARA
G-ch	RV727	RV728	RV729	RV730
R-ch	RV723	RV724	RV725	RV726
B-ch	RV731	RV732	RV733	RV734

Adjust the waveform for flat



(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

• RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12.
Suffix -11; Serial No. Up to 40300
Suffix -12; Serial No. 40301 to 42700



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

Note: After the adjustment, set button as follows.

GAMMA SELECT (OFF) button/MSU-350 → lamp goes off

GAMMA SELECT (0.45) button/MSU-350 → light up

Serial No. Up to 40300

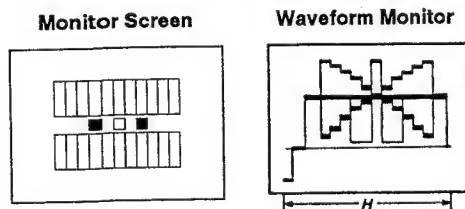
3-21. FLARE ADJUSTMENT

Equipment: Waveform monitor

Preparation

- Video signal select button/BVP-370P (rear panel) → "G"
- S1 (FLARE) /VA-86 board → "ON"

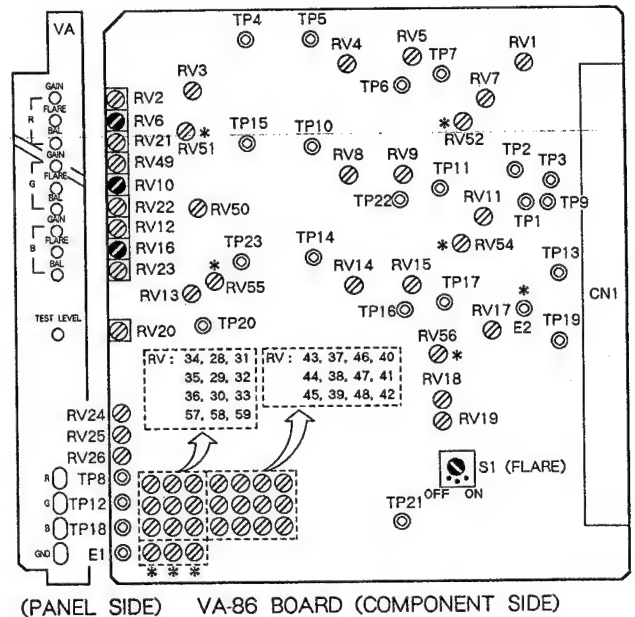
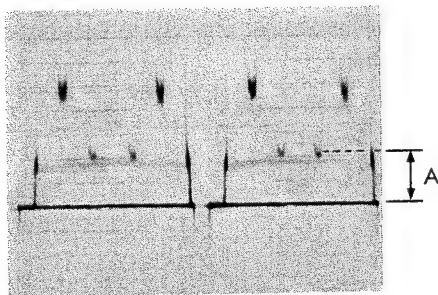
Object: Gray scale chart



- Lens zoom:** Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.
- Lens iris:** Adjust the iris control so that the video level at MONITOR OUT connector (camera side panel) is 700 ± 10 mV.
- Test point:** MONITOR OUT connector (camera side panel)

Adjustment Procedures

1. RV6 [R FLARE] /VA-86 board → fully counterclockwise ○.
2. Video Signal select button/BVP-370P (rear panel) → "R"
3. Measure level A.

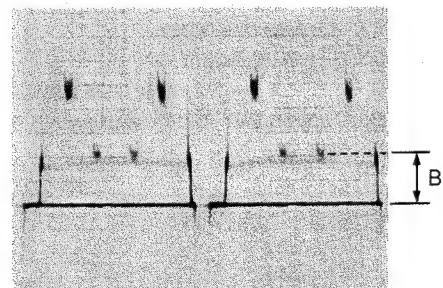


(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12.
 Suffix -11; Serial No. Up to 40300
 Suffix -12; Serial No. 40301 to 42700

4. Perform adjustment in order of G and B with the video signal select button.

	Adj. point/VA-86 Board	Spec.
G-ch	RV10 (G FLARE)	B=A
B-ch	RV16 (B FLARE)	



Serial No. 40301 to 42700

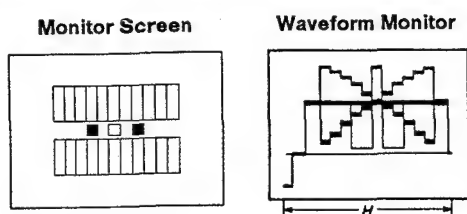
3-21. FLARE ADJUSTMENT

Equipment: Waveform monitor

Preparation

- GAMMA SELECT (0.45) button/MSU-350 → light up
- Video signal select button/BVP-370P (rear panel) → "G"
- RV10 (G FLARE) } /VA-86 board
- RV6 (R FLARE) } → fully counterclockwise ○
- RV16 (B FLARE)

Object: Gray scale chart



Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

Lens iris: Adjust the iris control so that the video level at MONITOR OUT connector (camera side panel) is 700 ± 10 mV.

Test point: MONITOR OUT connector (camera side panel)

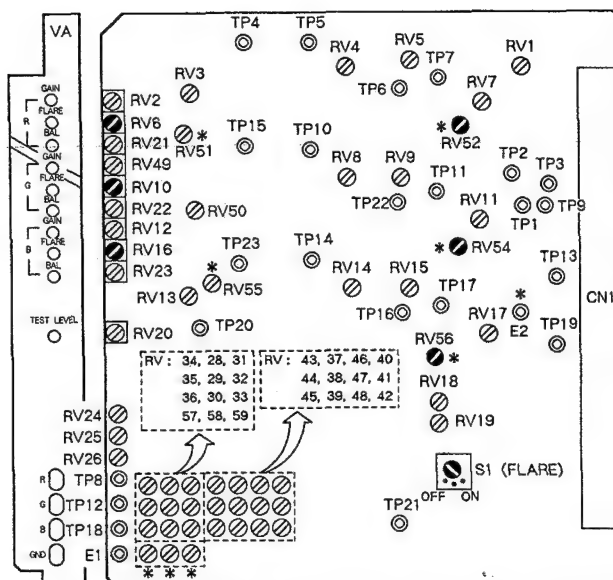
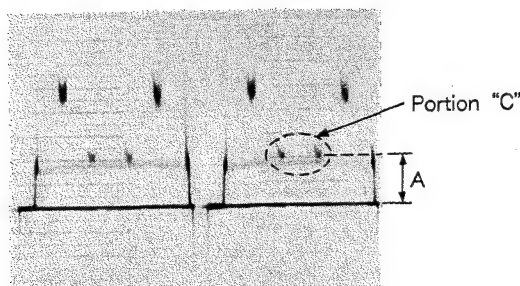
Adjustment Procedures

1. Perform adjustment in order of G, R and B with the video signal select button.

VA-86 board

	Adj. point	How to adjust
G-ch	RV54	Adjust so that the portion "C" of the waveform does not fluctuate even when the S1 (FLARE)/VA-86 board is turned ON or OFF.
R-ch	RV52	
B-ch	RV56	

2. • S1 (FLARE)/VA-86 board → "ON"
- RV6 (R FLARE)/VA-86 board → fully counterclockwise ○.
3. Video Signal select button/BVP-370P (rear panel) → "R"
4. Measure level A.

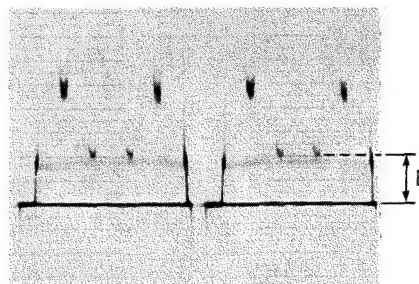


(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12.
Suffix -11; Serial No. Up to 40300
Suffix -12; Serial No. 40301 to 42700

5. Perform adjustment in order of G and B with the video signal select button.

	Adj. point/VA-86 Board	Spec.
G-ch	RV10 (G FLARE)	B=A
B-ch	RV16 (B FLARE)	



Serial No. 42701 and higher

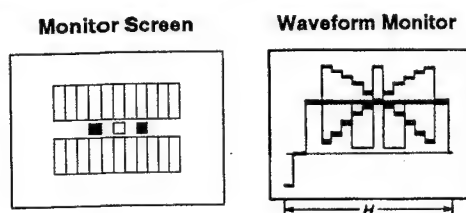
3-21. FLARE ADJUSTMENT

Equipment: Waveform monitor

Preparation

- GAMMA SELECT (0.45) button/MSU-350 → light up
- Video signal select button/BVP-370P (rear panel) → "G"
- RV305 (G FLARE) } /VA-131A board
- RV105 (R FLARE) } → fully counterclockwise ○
- RV505 (B FLARE)

Object: Gray scale chart



Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

Lens iris: Adjust the iris control so that the video level at MONITOR OUT connector (camera side panel) is 700 ± 10 mV.

Test point: MONITOR OUT connector (camera side panel)

Adjustment Procedures

1. Perform adjustment in order of G, R and B with the video signal select button.

VA-131A board

Adj. point	How to adjust
G-ch RV304	Adjust so that the portion "C" of the waveform does not fluctuate even when the S1 (FLARE)/VA-131A board is turned ON or OFF.
R-ch RV104	
B-ch RV504	

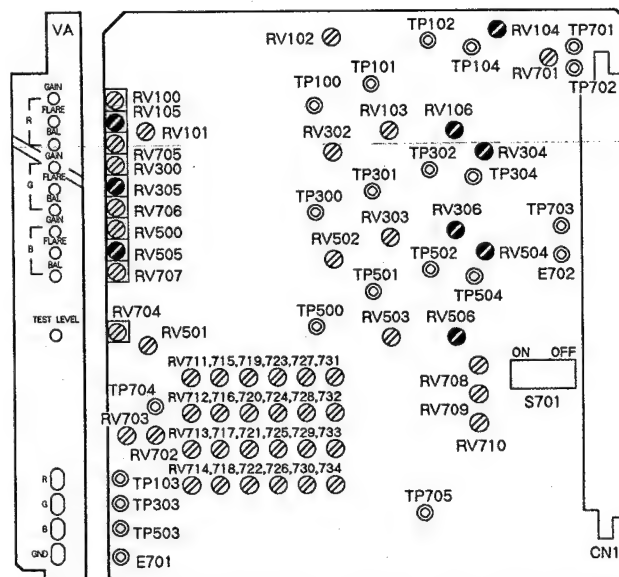
2. RV305 (G FLARE) } /VA-131A board
 - RV105 (R FLARE) } → fully clockwise ○
 - RV505 (B FLARE)
- CLOSE button/MSU-350 → "ON"

3. VA-131 board

Adj. point	How to adjust
G-ch RV306	Adjust so that the pedestal level of the waveform does not fluctuate even when the S1 (FLARE)/VA-131A board is turned ON or OFF.
R-ch RV106	
B-ch RV506	

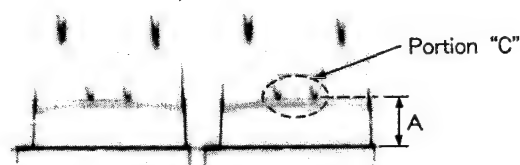
4. Adjust the iris control so that the video level at MONITOR OUT connector (camera side panel) is 700 ± 10 mV.

5. • S701 (FLARE)/VA-131 board → "ON"
- RV105 (R FLARE) /VA-131A board → fully counterclockwise ○.



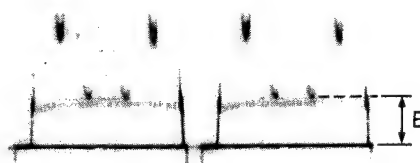
(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

6. Video Signal select button/BVP-370P (rear panel) → "R"
7. Measure level A.



8. Perform adjustment in order of G and B with the video signal select button.

Adj. point/VA-131A Board	Spec.
G-ch RV305 (G FLARE)	B=A
B-ch RV505 (B FLARE)	



3-22. GAMMA BALANCE ADJUSTMENT

Equipment: Oscilloscope

Preparation

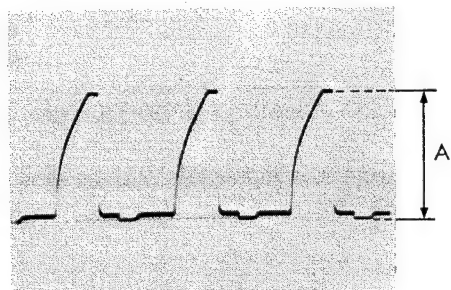
- TEST 1 button/MSU-350 → "ON"
- GAMMA SELECT (0.45) button/MSU-350 → light up

Adjustment Procedures

Adjust the following controls so that the peak level of the waveform does not fluctuate even when the GAMMA SELECT (OFF) button on the MSU-350 is turned ON (lamp goes off) and OFF (light up).

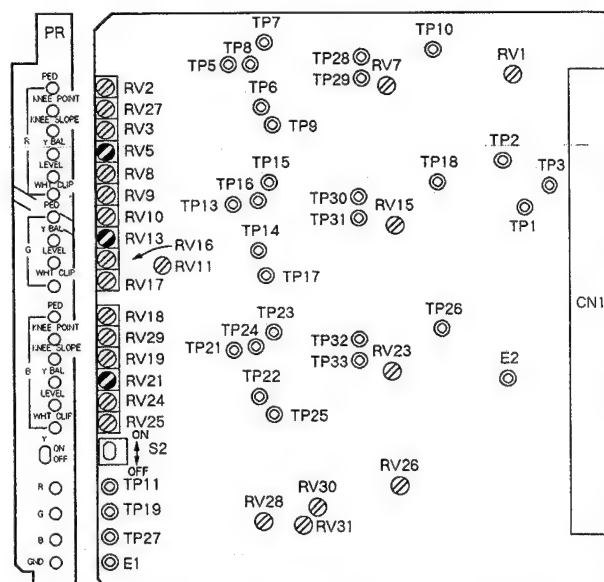
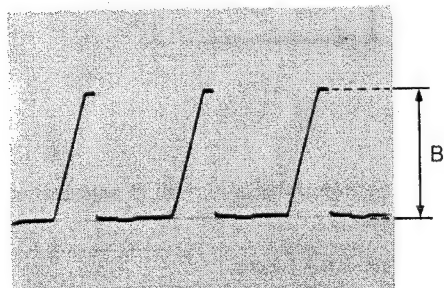
	Test Point/Extension board	Adj. Point/PR-130
G-ch	TPA20 (GND;E1)	RV13 (G γ BAL)
R-ch	TPA14 (GND;E1)	RV5 (R γ BAL)
B-ch	TPA26 (GND;E1)	RV21 (B γ BAL)

Y : ON



A = B

Y : OFF



(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

Note: After the adjustment, set button as follows.

GAMMA SELECT (0.45) button/MSU-350 → light up

GAMMA SELECT (OFF) button/MSU-350 → lamp goes off

TEST 1 button/MSU-350 → "OFF"

3-23. GAMMA CORRECTION ADJUSTMENT

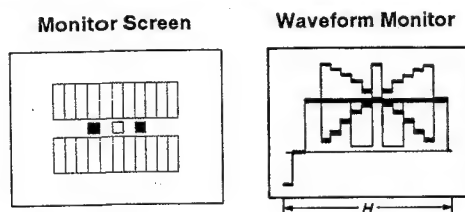
Equipment: Waveform monitor

To be extended: PR-130 board

Preparation

- Video Signal Select button/BVP-370P (rear panel) → "G"
- RESPONSE switch/waveform monitor → "LUM"

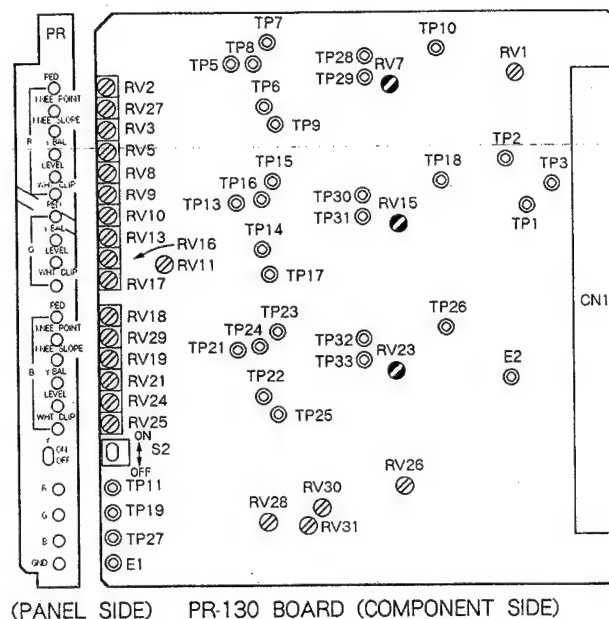
Object: Gray scale chart (Sony standard chart)



Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

Lens iris: Adjust the iris control so that the video level at MONITOR OUT connector (camera side panel) is 700 ± 10 mV.

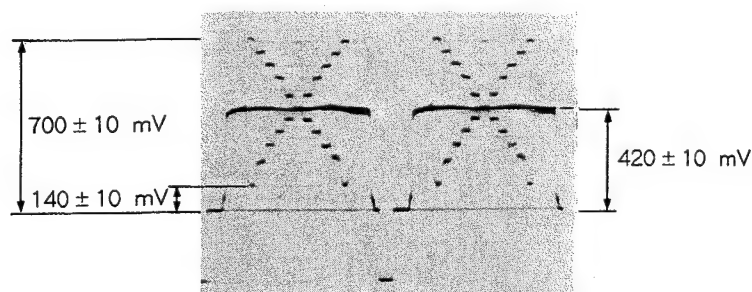
Test point: MONITOR OUT connector (camera side panel)



Adjustment Procedures

- Before adjustment, select the channel in order of G, R and B with the video signal select button and adjust the peak level at the MONITOR OUT connector to 700 ± 10 mV with iris control and adjust the video level in first step on the gray scale waveform to 140 ± 10 mV with MASTER BLACK control/MSU-350 respectively.

	Adj. Point/PR-130	Specification
G-ch	RV15 (G γ)	420 ± 10 mV
R-ch	RV7 (R γ)	
B-ch	RV23 (B γ)	



3-24. KNEE CORRECTION ADJUSTMENT

Equipment: Oscilloscope

To be extended: PR-130 board

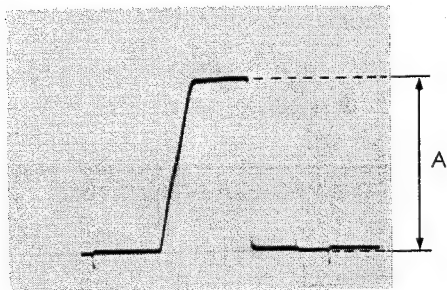
Preparation

- TEST 1 button/MSU-350 → "ON"
- GAMMA SELECT (OFF) button/MSU-350 → light up
- KNEE OFF button/MSU-350 → "ON" (Lamp goes off)

Adjustment Procedure

1. AUTO KNEE button/MSU-350 → "OFF" (Lamp goes off)
MASTER GAIN select button/MSU-350 → "6"
2. Test point: TP14 (GND;E1)/PR-130 board
Adjusting point: ●RV28 (G KNEE POINT)

Specification: $A = 960 \pm 10 \text{ mVp-p}$ /PR-130 board



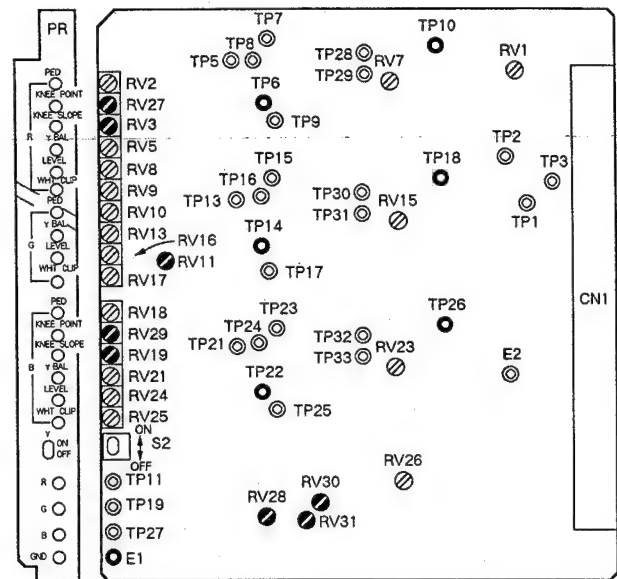
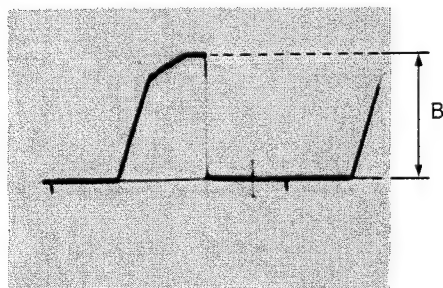
3. Perform adjustment in order of R-ch and B-ch as follows.

PR-130 board

	Test point	Adj. point	Specification
R-ch	TP6 (GND;E1)	●RV27	Level "A"
B-ch	TP22 (GND;E1)	●RV29	

4. Test point: TP18 (GND;E1)/PR-130 board
Adjusting point: ●RV11 (G KNEE SLOPE)

Specification: $B = 1.85 \pm 0.02 \text{ Vp-p}$



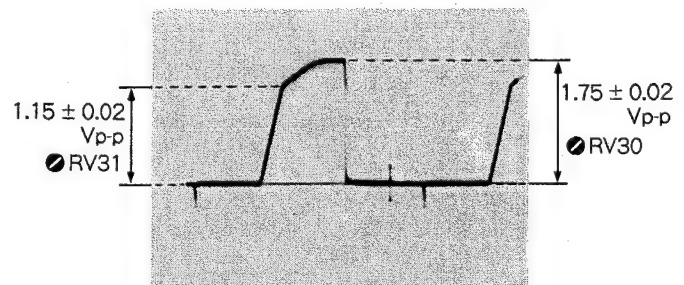
(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

5. Perform adjustment in order of R-ch and B-ch as follows.

PR-130 board

	Test point	Adj. point	Specification
R-ch	TP10 (GND;E1)	●RV3	Level "B"
B-ch	TP26 (GND;E1)	●RV19	

6. MASTER GAIN select button/MSU-350 → "9"
AUTO KNEE button/MSU-350 → "ON" (light up)
7. Test point: TP18 (GND;E1)/PR-130 board
Adjustment: Adjust ●RV30 and ●RV31/PR-130 board until the specification is met.



Note: After the adjustment, set buttons as follows.
MASTER GAIN select button/MSU-350 → "0"
AUTO KNEE button/MSU-350 → "OFF"
GAMMA SELECT (OFF) button/MSU-350 → lamp goes off

3-25. WHITE CLIP ADJUSTMENT

Equipment: Waveform monitor

Preparation

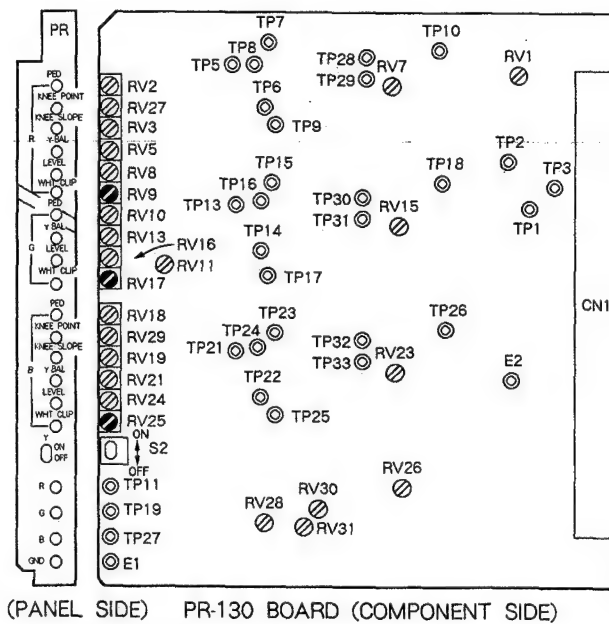
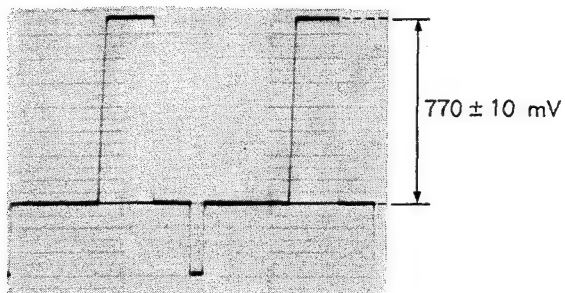
- TEST 1 button/MSU-350 → "ON"
- MASTER GAIN select button/MSU-350 → "18"

Test point: MONITOR OUT connector (camera side panel)

Adjustment Procedures

- Perform adjustment in order of G, R and B with the video signal select button.

	Adj. Point/PR-130	Specification
G-ch	RV17 (G WHT CLIP)	Peak level = 770 ± 10 mV
R-ch	RV9 (R WHT CLIP)	
B-ch	RV25 (B WHT CLIP)	



Note: After adjustment, set buttons as follows.
 MASTER GAIN select button/MSU-350 → "0"
 TEST 1 button/MSU-350 → "OFF"

STEP4. DETAIL SIGNAL SYSTEM ADJUSTMENT

4-1. IE-26P BOARD +5V CONFIRMATION

Note: This adjustment influences operation of the IE-26P board.

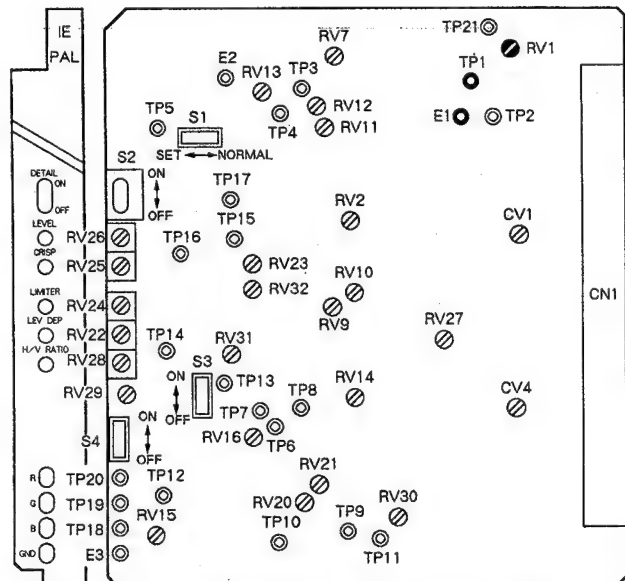
Therefore, when this adjustment is carried out, all of following adjustments in DETAIL SIGNAL SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

Equipment: Digital voltmeter
To be extended: IE-26P board
Test point: TP1 (GND; E1)/IE-26P board
Adjusting point: RV1/IE-26P board
Specification: $+5.0 \pm 0.02$ Vdc

Adjustment Procedures

- Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

4-2. V DTL NULL ADJUSTMENT

Equipment: Oscilloscope

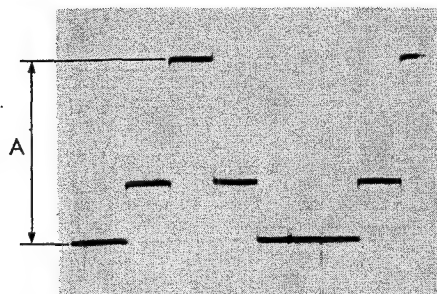
To be extended: IE-26P board

Preparation

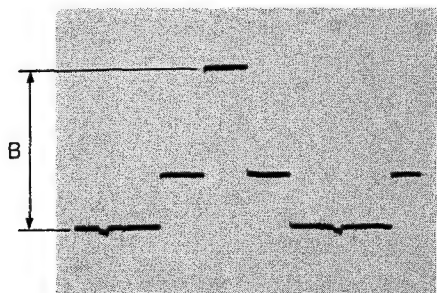
- TEST 2 button/MSU-350 → "ON"

Adjustment Procedures

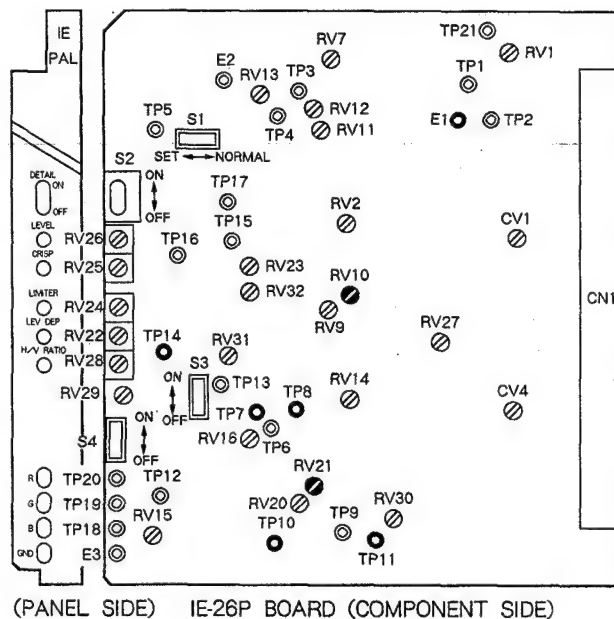
1. Measure a level A of TP10 (GND; E1) /IE-26P board.



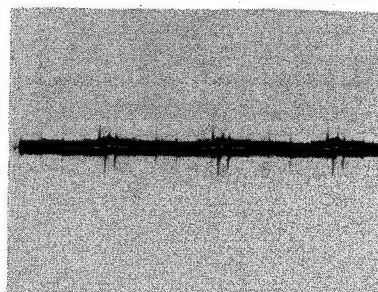
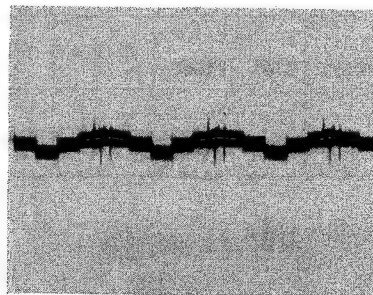
2. Adjust RV21/IE-26P board so that a level of TP11 (GND; E1) /IE-26P board is the same as A.
3. Measure a level B of TP7 (GND; E1) /IE-26P board.



4. Adjust RV10/IE-26P board so that a level of TP8 (GND; E1) /IE-26P board is the same as B.
5. Make sure that the waveform of TP14 (GND; E1)/IE-26P board is flat. If the waveform is not flat, make fine tuning alternately with RV10 and RV21/IE-26P board.



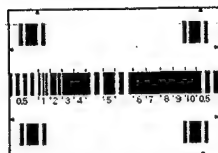
TP14 (GND;E1)/IE-26P board



4-3. IE FREQUENCY RESPONSE ADJUSTMENT

Equipment: Oscilloscope
To be extended: IE-26P board
Object: Burst chart

Monitor Screen

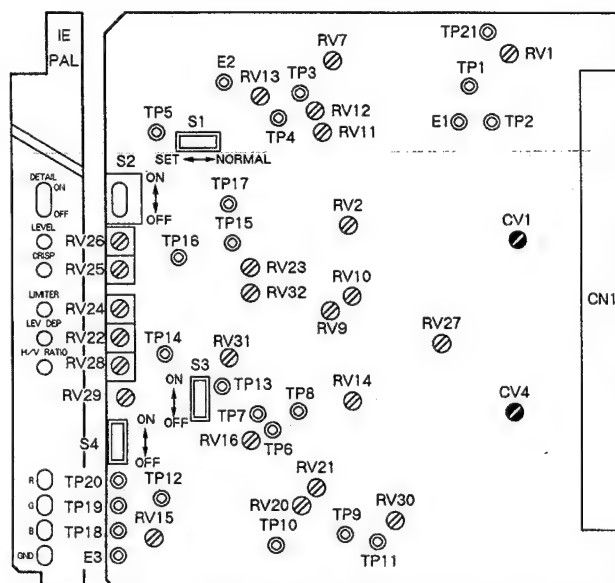


Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

Lens iris: Adjust the iris control so that the 1.0 MHz level at MONITOR OUT connector (camera side panel) is 700 ± 10 mV.

Adjustment Procedure

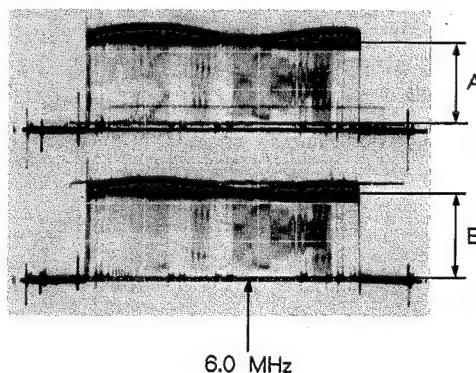
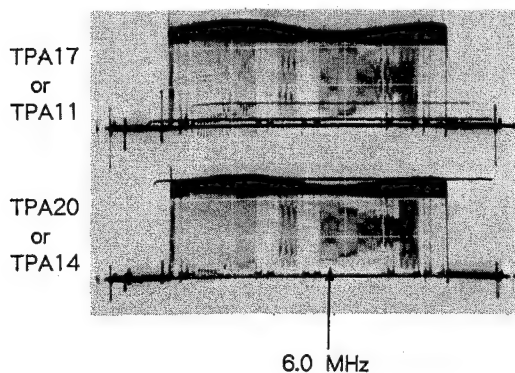
Adjust the following \odot CVs so that the input level and output level at 6.0 MHz portion are almost equal as shown below.



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

IE-26P board

	Test point (Input signal)	Test point (Output signal)	Adjusting point	Specification (6.0 MHz)
G-ch	TPA17 (GND:TPB17)	TPA20 (GND:TPB20)	\odot CV4	$A \approx B$
R-ch	TPA11 (GND:TPB11)	TPA14 (GND:TPB14)	\odot CV1	$A \approx B$



4-4. G-CH 1H PHASE ADJUSTMENT

Note: Perform the adjustment only when changing the delay line (DL5).

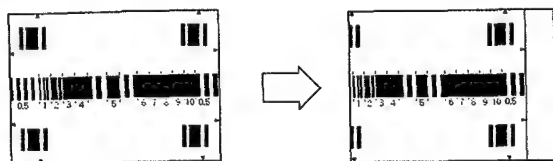
Equipment: Waveform monitor

To be extended: IE-26P board

Preparation

- KNEE OFF button/MSU-350 → "OFF" (light up)
- DETAIL OFF button/MSU-350 → "OFF" (light up)
- GAMMA SELECT (OFF) button/MSU-350 → light up
- Video signal select button/BVP-370P (rear panel) → "G"

Object: Burst chart



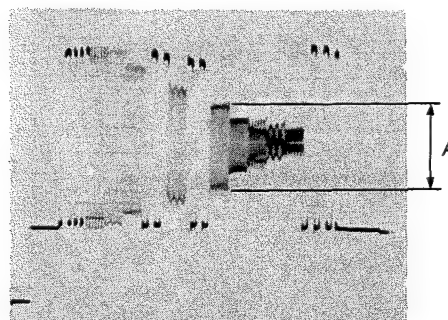
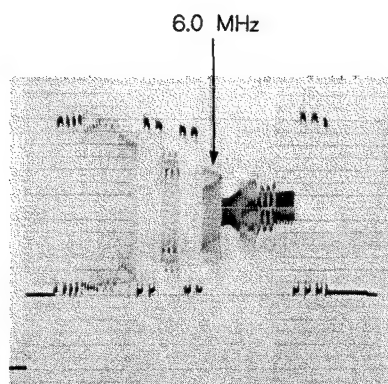
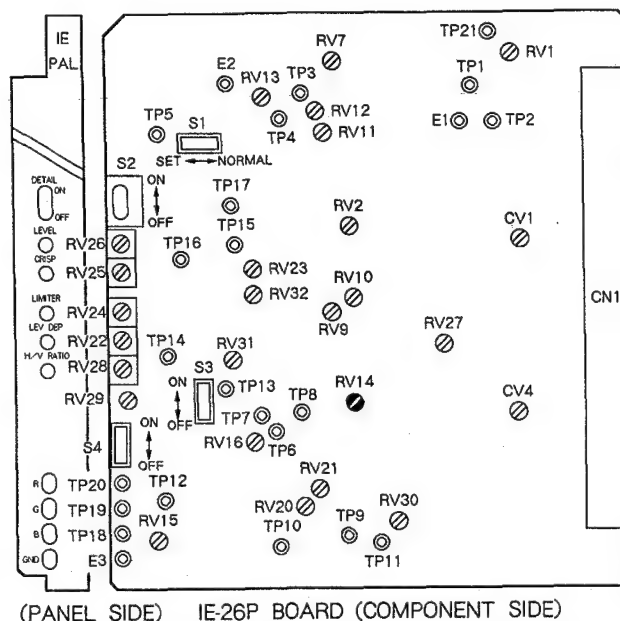
Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

Lens iris: Adjust the iris control so that the 1.0 MHz level at MONITOR OUT connector (camera side panel) is 700 ± 10 mV.

Test point: MONITOR OUT connector (camera side panel)

Adjustment Procedures

1. Push the WHITE button (AUTO SETUP button)/MSU-350 for performing the automatic white balance.
2. Make the camera head pan so that the 6.0 MHz portion at burst chart is positioned in the center of monitor screen.
3. Adjust the focus control of the lens so that the 6.0 MHz portion is just focused.
4. Push both "G" and "B" of the video signal select button/BVP-370P (rear panel).
5. Adjust RV14/IE-26P board so that the 6 MHz aliasing signal level "A" is minimum.



4-5. G-CH 1H/2H PHASE ADJUSTMENT

Note: Perform the adjustment only when changing the delay line (DL5).

Equipment: Oscilloscope
To be extended: IE-26P board
Object: Burst chart

Monitor Screen

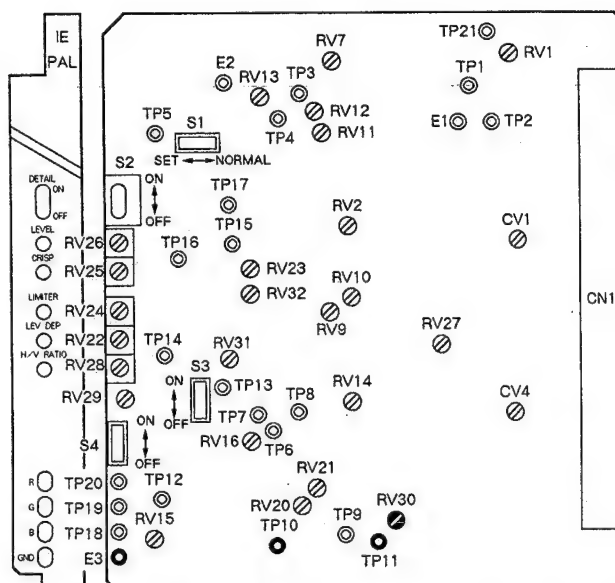


Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

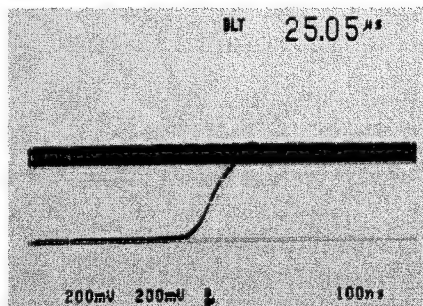
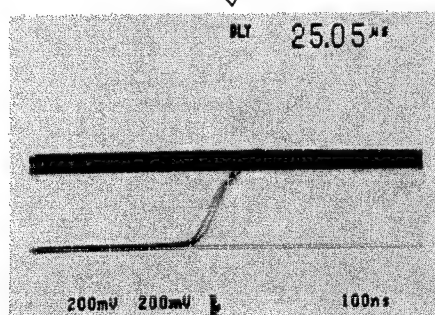
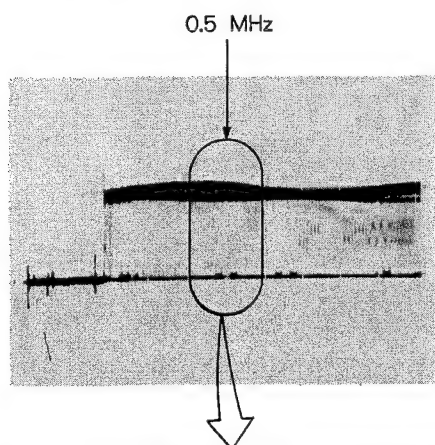
Lens iris: Adjust the iris control so that the 1.0 MHz level at MONITOR OUT connector (camera side panel) is 700 ± 10 mV.

Adjustment Procedures

1. Connect the CH-1 probe of oscilloscope to TP10 (GND;E3)/IE-26P board.
2. Connect the CH-2 probe of oscilloscope to TP11 (GND;E3)/IE-26P board.
3. Adjust RV30/IE-26P board so that the phase of TP11 coincides with the phase of TP10.



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)



4-6. R-CH 1H PHASE ADJUSTMENT

Note: Perform the adjustment only when changing the delay line (DL1).

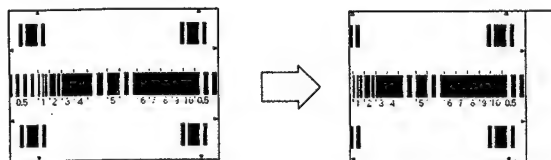
Equipment: Waveform monitor

To be extended: IE-26P board

Preparation

- KNEE OFF button/MSU-350 → "OFF" (light up)
- DETAIL OFF button/MSU-350 → "OFF" (light up)
- GAMMA SELECT (OFF) button/MSU-350 → light up
- Video signal select button/BVP-370P (rear panel) → "G"

Object: Burst chart



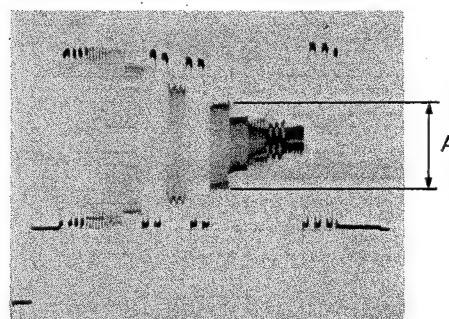
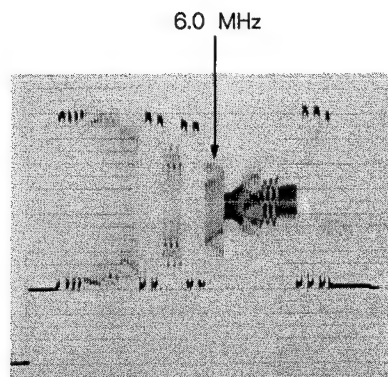
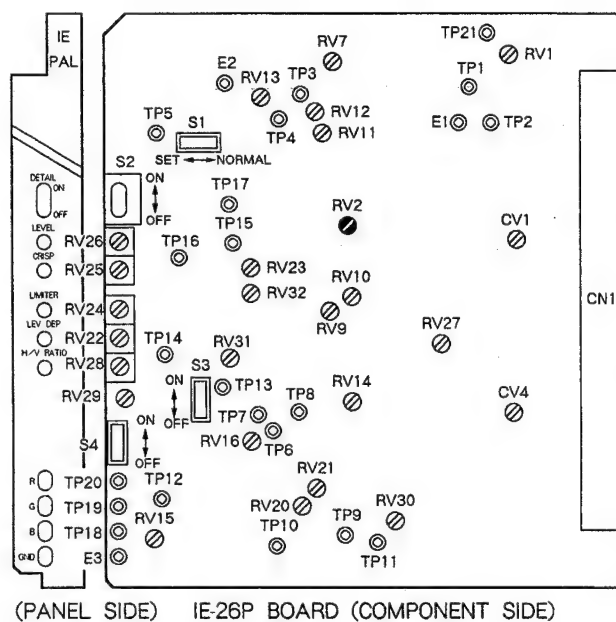
Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

Lens iris: Adjust the iris control so that the 1.0 MHz level at MONITOR OUT connector (camera side panel) is 700 ± 10 mV.

Test point: MONITOR OUT connector (camera side panel)

Adjustment Procedures

1. Push the WHITE button (AUTO SETUP button)/MSU-350 for performing the automatic white balance.
2. Make the camera head pan so that the 6.0 MHz portion at burst chart is positioned in the center of monitor screen.
3. Adjust the focus control of the lens so that the 6.0 MHz portion is just focused.
4. Push both "G" and "R" of the video signal select button/BVP-370P (rear panel).
5. Adjust RV2/IE-26P board so that the 6 MHz aliasing signal level "A" is minimum.



4-7. R-CH 1H/2H PHASE ADJUSTMENT

Note: Perform the adjustment only when changing the delay line (DL1).

Equipment: Oscilloscope
To be extended: IE-26P board
Object: Burst chart

Monitor Screen

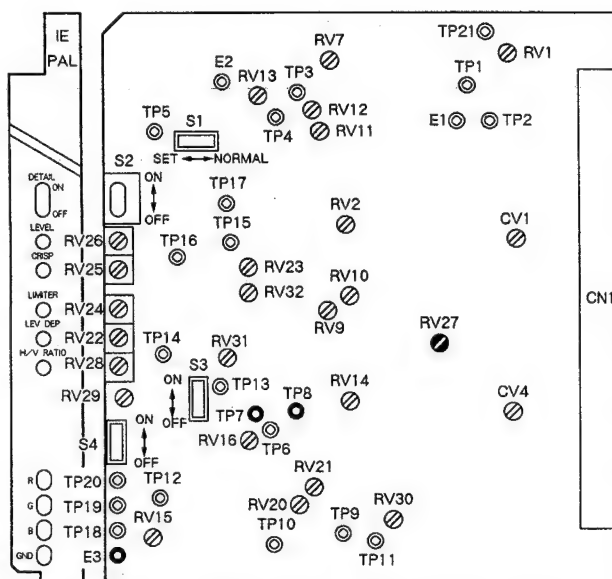


Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

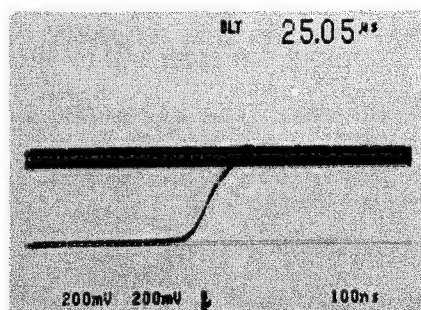
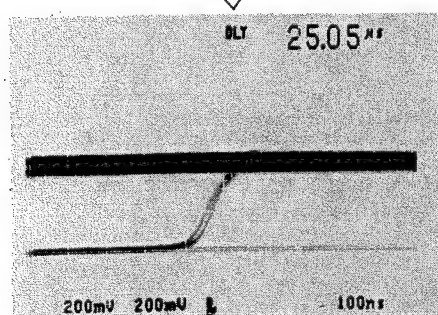
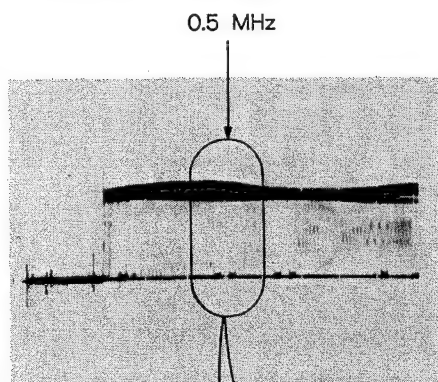
Lens iris: Adjust the iris control so that the 1.0 MHz level at MONITOR OUT connector (camera side panel) is 700 ± 10 mV.

Adjustment Procedures

1. Connect the CH-1 probe of oscilloscope to TP7 (GND;E3)/IE-26P board.
2. Connect the CH-2 probe of oscilloscope to TP8 (GND;E3)/IE-26P board.
3. Adjust RV27/IE-26P board so that the phase of TP8 coincides with the phase of TP7.



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)



4-8. H DTL BALANCE ADJUSTMENT

Equipment: Oscilloscope

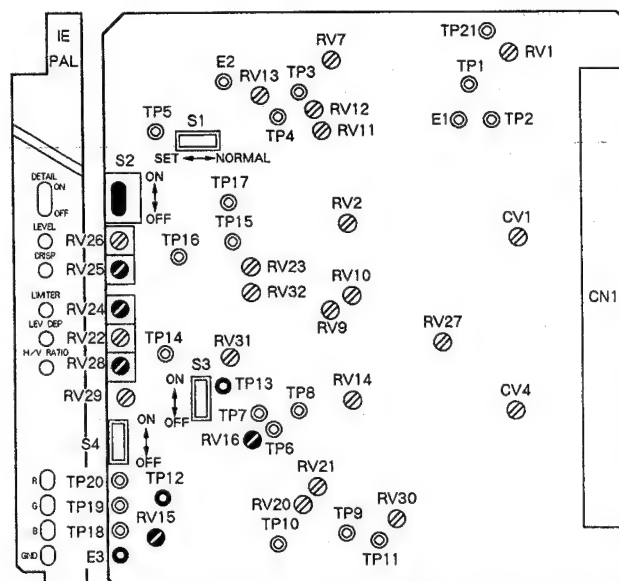
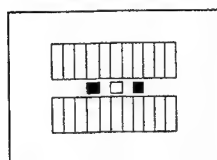
To be extended: IE-26P board

Preparation

- DETAIL OFF button/MSU-350 → "ON" (lamp goes off)
- Video signal select button/ BVP-370P (rear panel) → "G"
- S2 (DTL)/IE-26P board → "ON"
- RV28 (H/V RATIO)/IE-26P board
→ fully counterclockwise
- RV24 (LIMITER)/IE-26P board
→ fully counterclockwise
- RV25 (CRISP)/IE-26P board
→ fully counterclockwise

Object: Gray scale chart

Monitor Screen



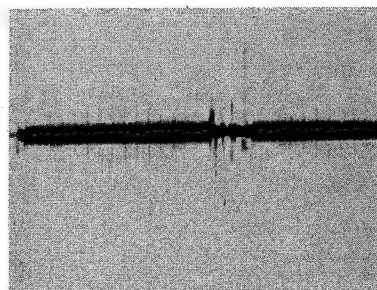
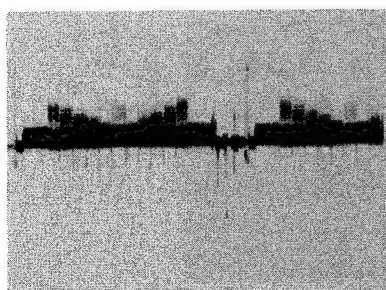
(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

Lens iris: Adjust the iris control so that the video level at the MONITOR OUT connector (camera side panel) is 650 ± 10 mV.

Adjustment Procedures

1. Adjust RV15 (LF DTL) on the IE-26P board so that the waveform at TP12 (GND; E3) on the IE-26P board is flat.
2. Adjust RV16 (HF DTL) on the IE-26P board so that the waveform at TP13 (GND; E3) on the IE-26P board is flat.



4-9. HF/LF DTL BALANCE ADJUSTMENT

Equipment: Waveform monitor

To be extended: IE-26P board

Preparation

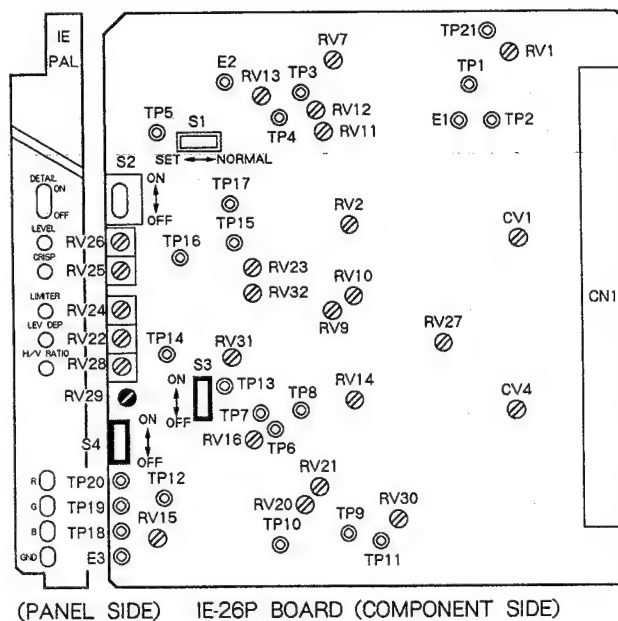
- Video signal select button/BVP-370P (rear panel) → "G"
- LINE SELECTOR (Waveform monitor) → "VAR"

Object: Burst chart

Monitor Screen



- Lens zoom:** Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.
- Lens iris:** Adjust the iris control so that the video level at the MONITOR OUT connector (camera side panel) is 700 ± 10 mV.
- Test point:** MONITOR OUT connector (camera side panel)

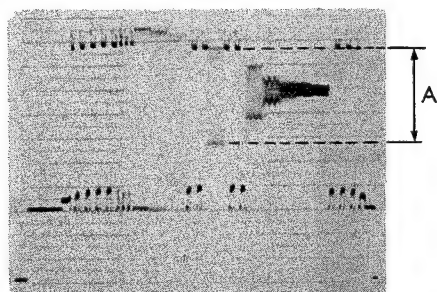


(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

Adjustment Procedures

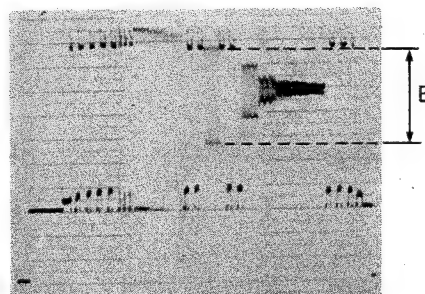
1. S3/IE-26P board → "ON"
S4/IE-26P board → "OFF"
2. Measure the detail level A at 5 MHz.
3. S3/IE-26P board → "OFF"
S4/IE-26P board → "ON"
4. Measure the detail level B at 5 MHz.
5. Adjust RV29/IE-26P board so that the levels A and B are equal even when the switches S3 and S4 are set according to any setting of procedures 1 and 3.

S3/IE-26P board → ON
S4/IE-26P board → OFF



LINE SELECTOR : VAR

S3/IE-26P board → OFF
S4/IE-26P board → ON



LINE SELECTOR : VAR

A = B

Note: After the adjustment, set switches as follows.

- S3/IE-26P board → "ON"
- S4/IE-26P board → "ON"

4-10. DC OFFSET ADJUSTMENT

Equipment: Oscilloscope

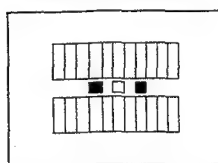
To be extended: IE-26P board

Preparation

- DETAIL OFF button/MSU-350 → "ON" (lamp goes off)
- Video signal select button/BVP370P (rear panel) → "G"
- S2 (DTL)/IE-26P board → "ON"

Object: Gray scale chart

Monitor Screen



Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

Lens iris: Adjust the iris control so that the video level at the MONITOR OUT connector (camera side panel) is 650 ± 10 mV.

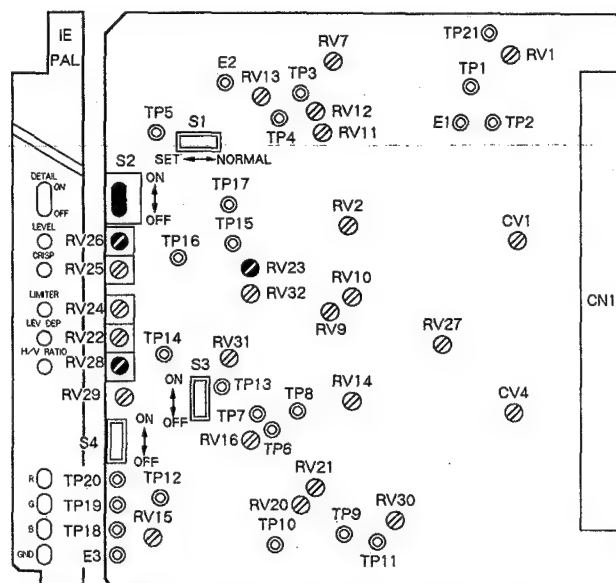
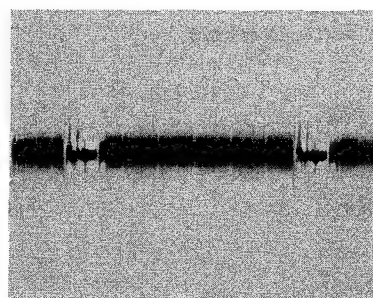
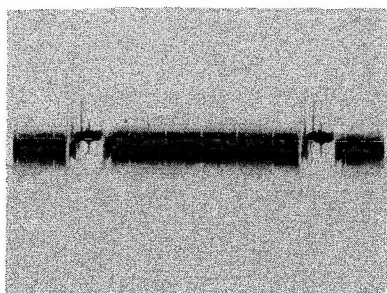
Test point: TPA28 (GND; E1)/extension board

Adjusting point: RV23 (OFFSET) IE-26P board

Specification: Adjust the waveform for flat.

Adjustment Procedures

1. Set RV28 (H/V RATIO) on the IE-26P board to mechanical center and turn RV26 (DTL GAIN) on the IE-26P board fully clockwise.
2. Adjust RV23/IE-26P board so that the waveform is flat.



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

4-11. LEVEL DEPENDENT ADJUSTMENT

Equipment: Waveform monitor

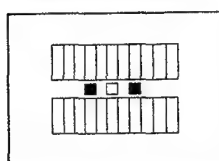
To be extended: IE-26P board

Preparation

- DETAIL OFF button/MSU-350 → "ON" (lamp goes off)
- Video signal select button/BVP-370P (rear panel) → "G"
- S2 (DTL)/IE-26P board → "ON"

Object: Gray scale chart

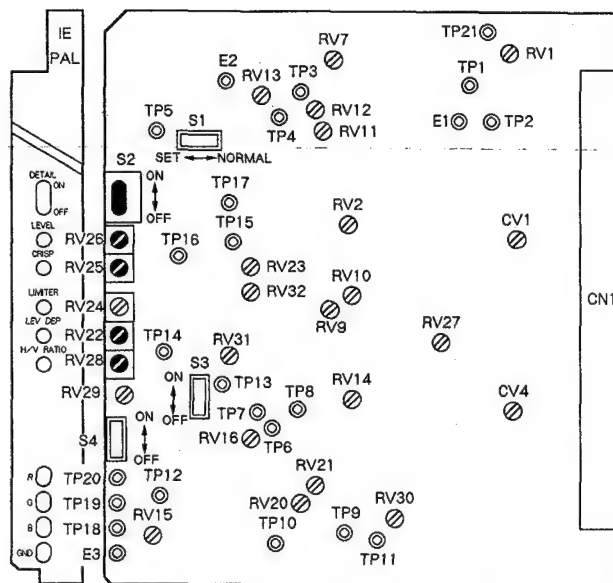
Monitor Screen



Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

Lens iris: Adjust the iris control so that the video level at the MONITOR OUT connector (camera side panel) is 650 ± 10 mV.

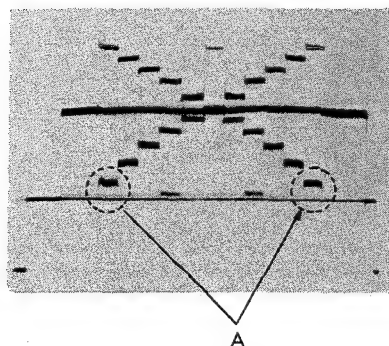
Test point: MONITOR OUT connector (camera side panel)



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

Adjustment Procedures

1. Set \odot RV28 (H/V RATIO) on the IE-26P board to mechanical center.
Turn \odot RV25 (CRISPING) on the IE-26P board fully counterclockwise \bigcirc .
Turn \odot RV26 (DTL GAIN) on the IE-26P board fully clockwise \bigcirc .
2. Turn \odot RV22 (LEVEL DEPENDENT) on the IE-26P board from the leftmost position clockwise slowly and stop where the spikes portion A start to decrease.



4-12. CRISPNING ADJUSTMENT

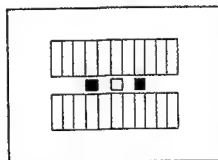
Equipment: Waveform monitor

Preparation

- DETAIL OFF button/MSU-350 → "ON" (lamp goes off)
- Video signal select button/BVP-370P (rear panel) → "G"
- S2 (DTL)/IE-26P board → "ON"

Object: Gray scale chart

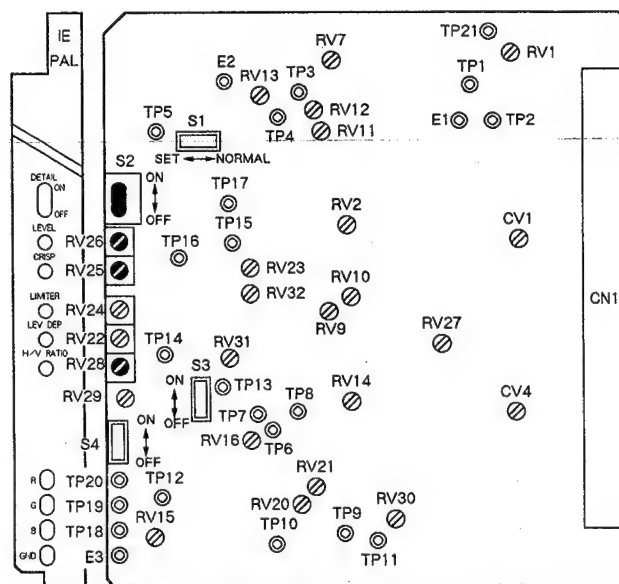
Monitor Screen



Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

Lens iris: Adjust the iris control so that the video level at the MONITOR OUT connector (camera side panel) is 650 ± 10 mV.

Test point: MONITOR OUT connector (camera side panel)



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

Adjustment Procedures

1. Set \odot RV28 (H/V RATIO) on the IE-26P board to mechanical center.
Set \odot RV26 (DTL GAIN) on the IE-26P board to mechanical center.
2. Observe the waveform monitor and turn \odot RV25 (CRISPING) on the IE-26P board clockwise until the noise on the black areas of the picture just starts to be reduced. Otherwise adjust to your preferred level.

4-13. DTL LIMITER ADJUSTMENT

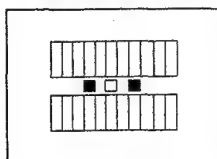
Equipment: Waveform monitor

Preparation

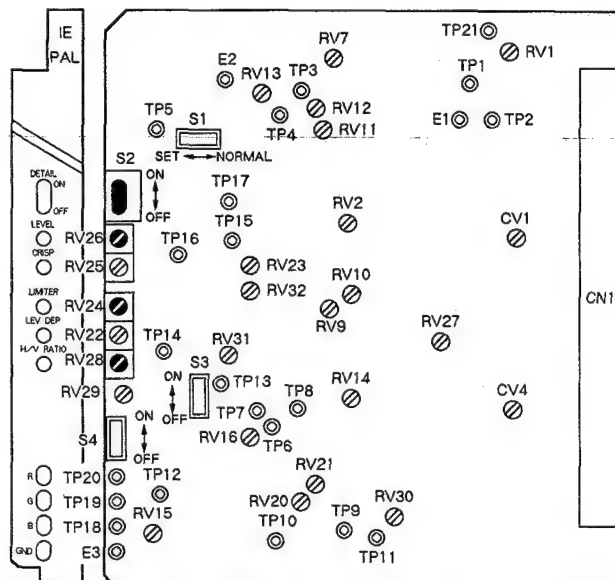
- DETAIL OFF button/MSU-350 → "ON" (lamp goes off)
- Video signal select button/BVP-370P (rear panel) → "G"
- S2 (DTL)/IE-26P board → "ON"

Object: Gray scale chart

Monitor Screen



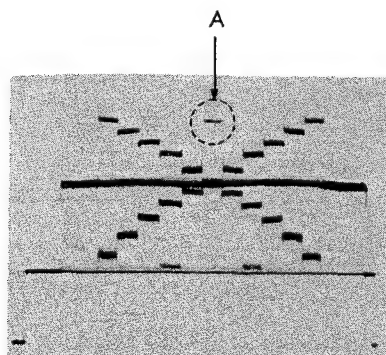
- Lens zoom:** Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.
- Lens iris:** Adjust the iris control so that the video level at the MONITOR OUT connector (camera side panel) is 650 ± 10 mV.
- Test point:** MONITOR OUT connector (camera side panel)



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

Adjustment Procedures

1. Set \odot RV28 (H/V RATIO) on the IE-26P board to mechanical center.
Turn \odot RV24 (LIMITER) on the IE-26P board fully counterclockwise \odot .
Turn \odot RV26 (DTL GAIN) on the IE-26P board fully clockwise \odot .
2. Turn \odot RV24 (LIMITER) on the IE-26P board clockwise slowly and stop where the spike at portion A becomes 2/3 of its maximum size.





4-14. H/V RATIO ADJUSTMENT

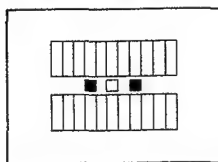
Equipment: Waveform monitor
B/W monitor

Preparation

- DETAIL OFF button/MSU-350 → "ON" (lamp goes off)
- Video signal select button/BVP-370P (rear panel) → "G"
- S2 (DTL)/IE-26P board → "ON"
- RV26 (DTL GAIN)/IE-26P board → fully clockwise

Object: Gray scale chart

Monitor Screen



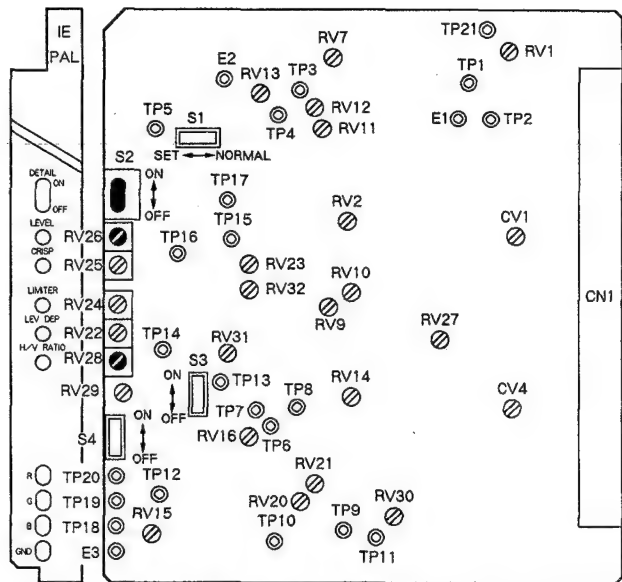
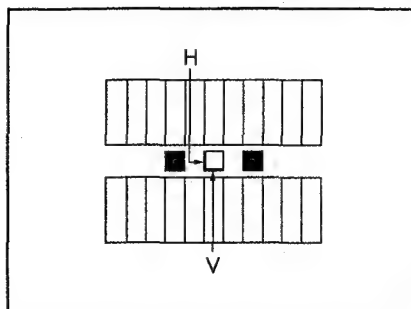
Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

Lens iris: Adjust the iris control so that the video level at the MONITOR OUT connector (camera side panel) is 650 ± 10 mV.

Test point: B/W monitor

Adjustment Procedures

1. Adjust RV28 (H/V RATIO) on the IE-26P board so that both horizontal and vertical detail levels are equal.



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

STEP 5. AUTO CONTROL SYSTEM ADJUSTMENT

5-1. AT-54 BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the AT-54 board.

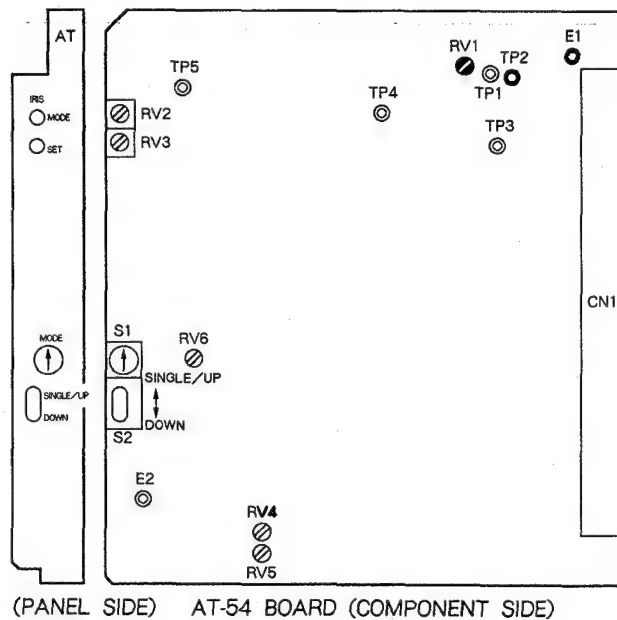
Therefore, when this adjustment is carried out, all of following adjustments in AUTO CONTROL SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

Equipment: Digital voltmeter
To be extended: AT-54 board
Test point: TP2 (GND;E1)/AT-54 board
Adjusting point: RV1/AT-54 board
Specification: $+5.0 \pm 0.02$ Vdc

Adjustment Procedures

- Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.



5-2. AUTO IRIS ADJUSTMENT

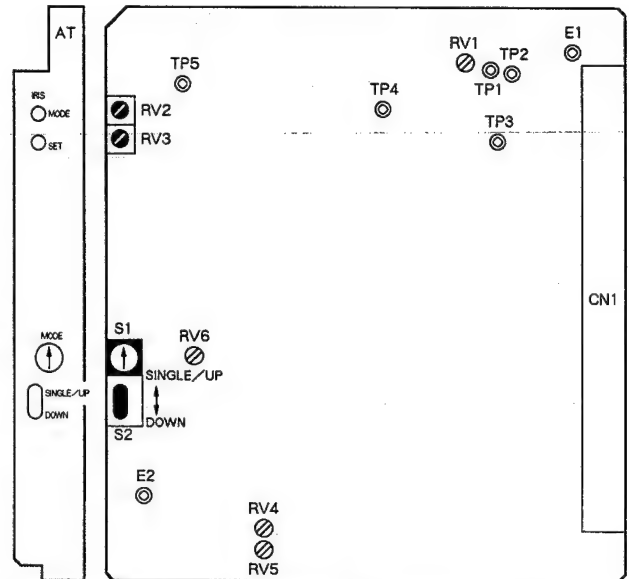
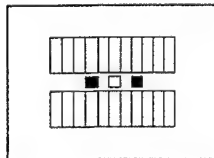
Equipment: Waveform monitor

Preparation

- AUTO IRIS button/MSU-350 → "ON"
- Video signal select button/BVP-370P (rear panel) → "G"
- S1 **MODE** /AT-54 board → "1"
- S2 **SINGLE/UP ↔ DOWN** /AT-54 board
→ push up S2 once
- Press the **WHITE** button for **AUTO SETUP** while shooting a gray scale chart with the camera, the **WHITE** button lights and the white balance is performed automatically. And then, press the **BLACK** button for **AUTO SETUP**, it lights. The iris will then be closed and the black balance and black set will be adjusted automatically.

Object: Gray scale chart

Monitor Screen



(PANEL SIDE) AT-54 BOARD (COMPONENT SIDE)

Lens zoom: Adjust the zoom control of the lens so that the chart frame matches the underscanned monitor frame.

Test point: MONITOR OUT connector (camera side panel)

Adjustment Procedures

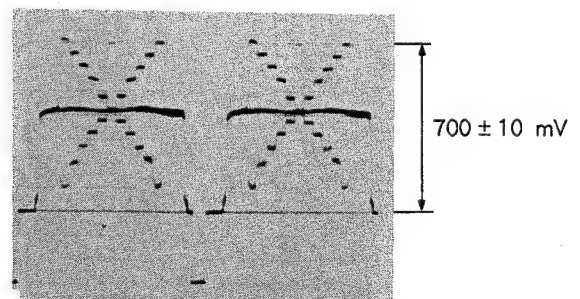
1. Put the machine into the auto iris operation mode. Auto iris is a function to control the lens iris constant by detecting the average level or peak level automatically from the video signal that is output from the camera. By turning the **RV2 (IRIS MODE)** on the AT-54 board, either average level or peak level can be selected.

RV2 (IRIS MODE)

Fully clockwise	→	Peak level × 1
↕		
Mechanical center	→	Peak level × 0.5 Average level × 0.5
↕		
Fully counterclockwise	→	Average level × 1

Adjust **RV2 (IRIS MODE)** to your preferred level.
(Normally mechanical center)

2. Adjust **RV3 (IRIS SET)** on the AT-54 board so that the peak level is 700 ± 10 mV.



Note: After the adjustment, set button as follows.

AUTO IRIS button/MSU-350 → "OFF"

S1 **MODE** /AT-54 board → "F"

5-3. CHARACTER POSITION ADJUSTMENT

Note: This adjustment should be performed only when the character position on the viewfinder is not proper.

Equipment: B/W monitor

To be extended: AT-54 board

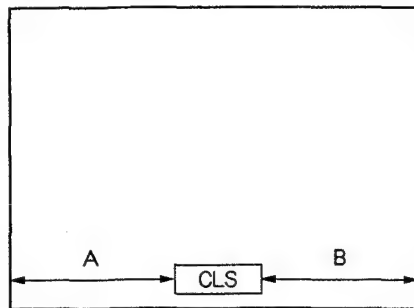
Preparation

- CLOSE button/MSU-350 → "ON"
- Video signal select button/BVP-370P (rear panel) → "G"

Test point: Viewfinder screen

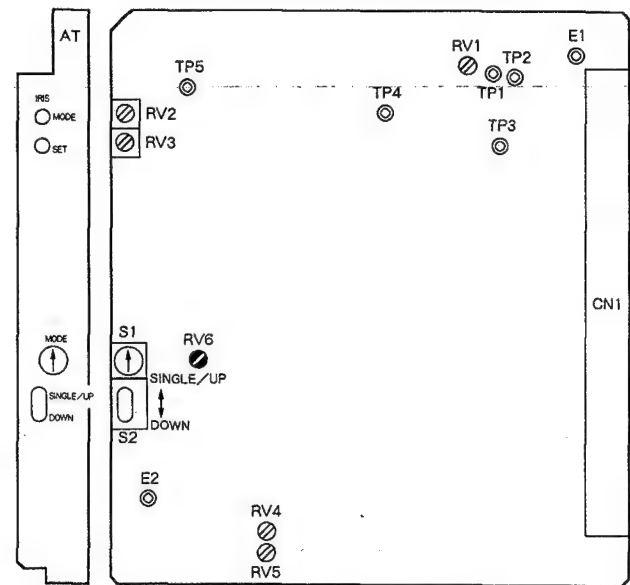
Adjustment Procedures

- Adjust \odot RV6 (CHR POSITION) on the AT-54 board so that letter CLS should be displayed and positioned at the center of the viewfinder screen.



viewfinder screen

A = B



(PANEL SIDE) AT-54 BOARD (COMPONENT SIDE)

5-4. WINDOW GATE ADJUSTMENT

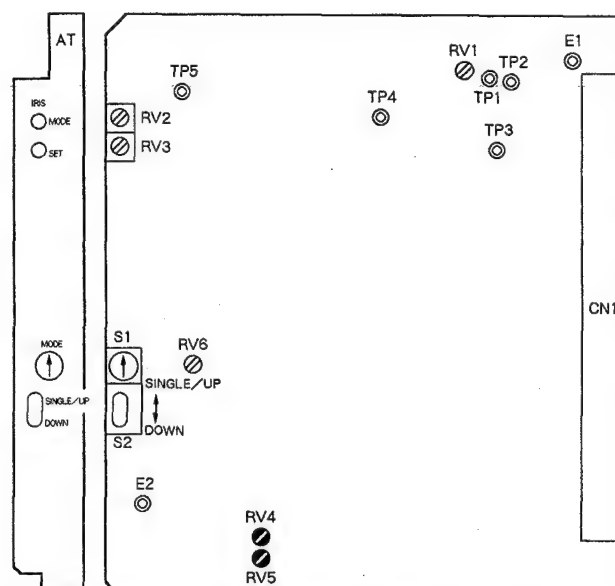
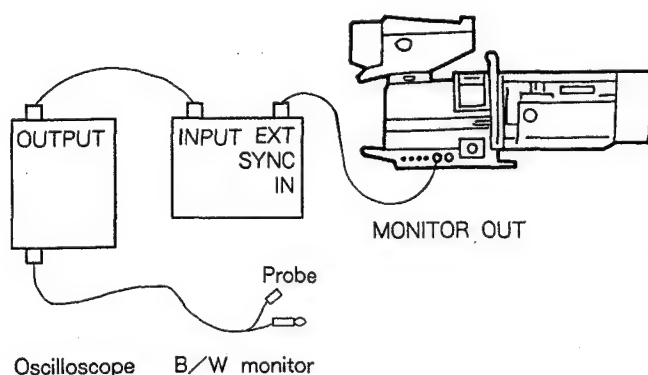
Note: Be sure to feed the picture monitor with EXT SYNC from the MONITOR OUT connector on camera.

Equipment: Oscilloscope, B/W monitor

To be extended: AT-54 board

Preparation

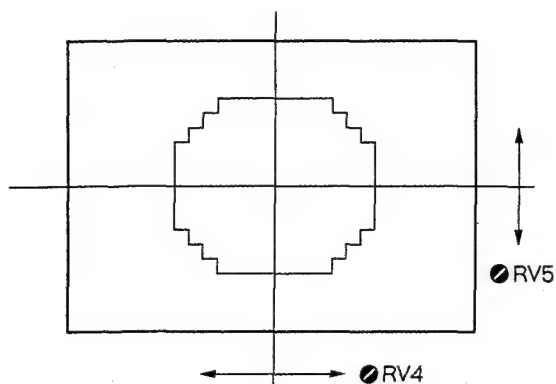
- S7(MONITOR SELECT)/MS-33 board → "VF"
- CLOSE button/MSU-350 → "ON"
- Connect the oscilloscope and B/W monitor as follows.



(PANEL SIDE) AT-54 BOARD (COMPONENT SIDE)

Adjustment Procedures

1. INPUT RANGE (Oscilloscope)
0.05 to 0.2 VOLTS/DIV
2. Connect a probe of oscilloscope to IC19-pin 2.
3. Adjust RV4 and RV5 so that the window is the center of B/W monitor.



B/W monitor screen (Underscanned monitor frame)

5-5. CC FILTER SERVO ADJUSTMENT

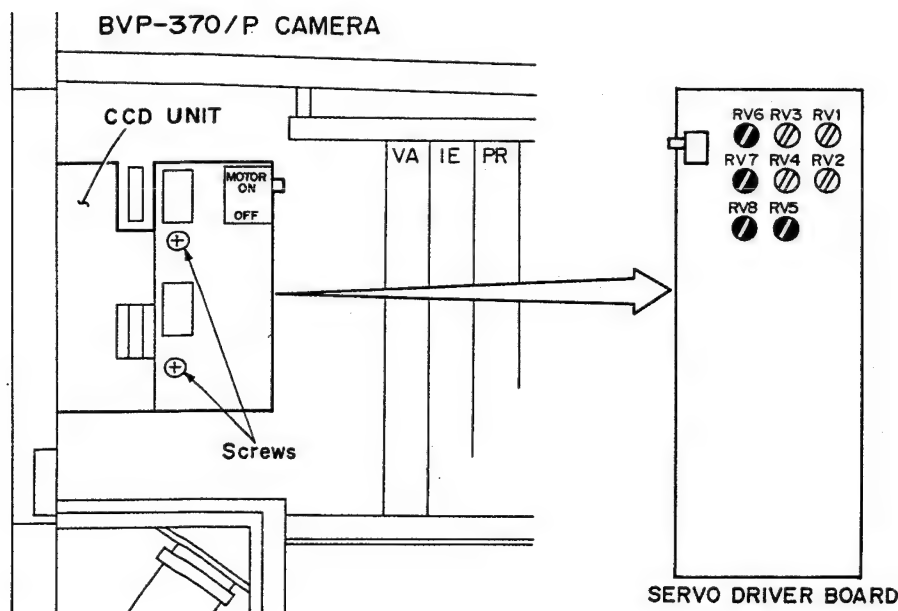
Note: This adjustment should be carried out only when the CC filter does not operate correctly from the MSU or from the camera.

Preparation

- MOTOR ON/OFF switch/servo driver → "ON"
- Remove two screws as shown below.

Adjustment Procedures

1. CC filter select button/MSU-350 → "A"
Adjust ⚙ RV5 (A-SET) so that the CC filter stops at the position "A".
2. CC filter select button/MSU-350 → "B"
Adjust ⚙ RV6 (B-SET) so that the CC filter stops at the position "B".
3. CC filter select button/MSU-350 → "C"
Adjust ⚙ RV7 (C-SET) so that the CC filter stops at the position "C".
4. CC filter select button/MSU-350 → "D"
Adjust ⚙ RV8 (D-SET) so that the CC filter stops at the position "D".
5. Make sure that the CC filter operates correctly by the selection from the camera.



5-6. ND FILTER SERVO ADJUSTMENT

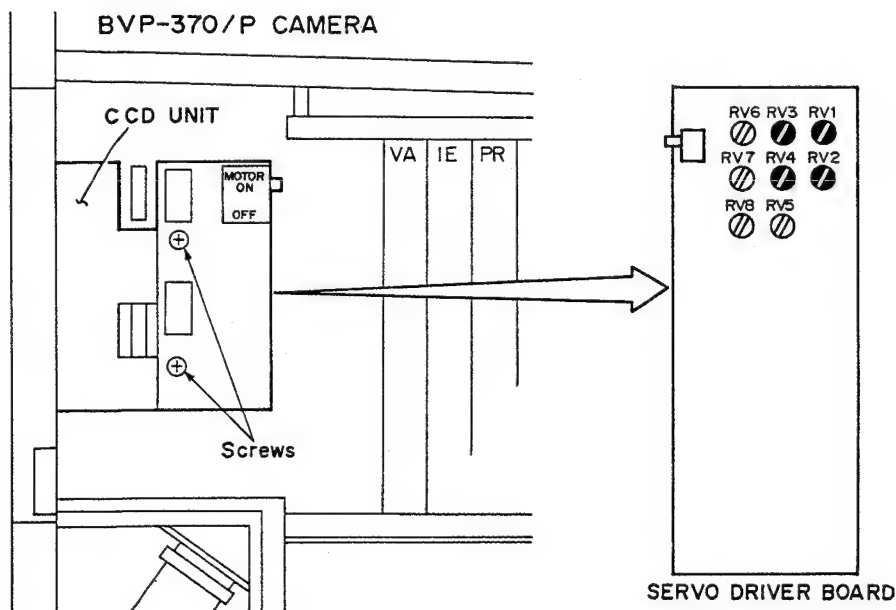
Note: This adjustment should be carried out only when the ND filter does not operate correctly from the MSU or from the camera.

Preparation

- MOTOR ON/OFF switch/servo driver → "ON"
- Remove two screws as shown below.

Adjustment Procedures

1. ND filter select button/MSU-350 → "0"
Adjust ● RV1 (0-SET) so that the ND filter stops at the position "0".
2. ND filter select button/MSU-350 → "1"
Adjust ● RV2 (1-SET) so that the ND filter stops at the position "1".
3. ND filter select button/MSU-350 → "2"
Adjust ● RV3 (2-SET) so that the ND filter stops at the position "2".
4. ND filter select button/MSU-350 → "3"
Adjust ● RV4 (3-SET) so that the ND filter stops at the position "3".
5. Make sure that the ND filter operates correctly by the selection from the camera.



STEP 6. VF INTERFACE SYSTEM ADJUSTMENT

6-1. MS-33 BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the MS-33 board.

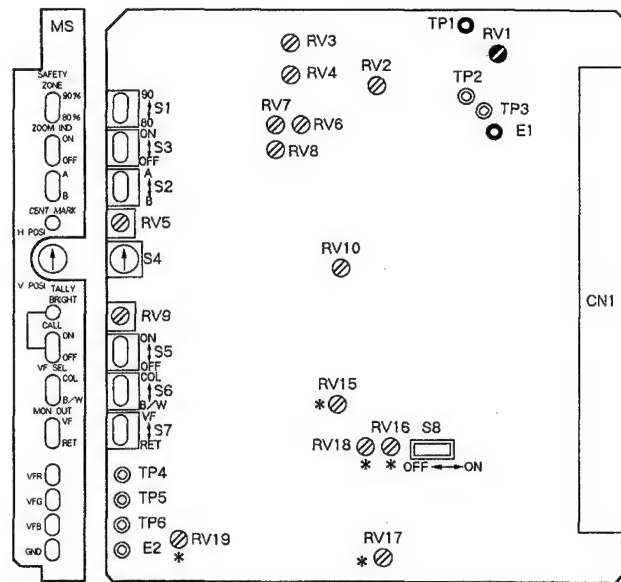
Therefore, when this adjustment is carried out, all of following adjustments in VF INTERFACE SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

Equipment: Digital voltmeter
To be extended: MS-33 board
Test point: TP2 (GND;E1)/MS-33 board
Adjusting point: RV1/MS-33 board
Specification: $+5.0 \pm 0.02$ Vdc

Adjustment Procedures

- Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.



(PANEL SIDE) MS-33 BOARD (COMPONENT SIDE)

RVs identified by marking "*" are mounted on the MS-33 board with a suffix of -12.
 Suffix -11; Serial No. Up to 40210
 Suffix -12; Serial No. 40301 and higher

6-2. SAFETY ZONE ADJUSTMENT

Equipment: Oscilloscope

To be extended: MS-33 board

Preparation

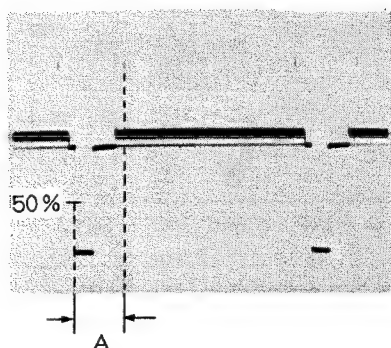
- CLOSE button/MSU-350 → "ON"
- Video signal select button/BVP-370P (rear panel) → "G"
- SAFETY ZONE switch/BVP-370P (rear panel) → "ON"
- CENTER MARKER switch/BVP-370P (rear panel) → "OFF"
- CURSOR button/BVP-370P (rear panel) → "OFF"
- S1 (SAFETY ZONE)/MS-33 board → "90%"

Test point: TPA38 (GND;E1)/extension board

Adjustment Procedures

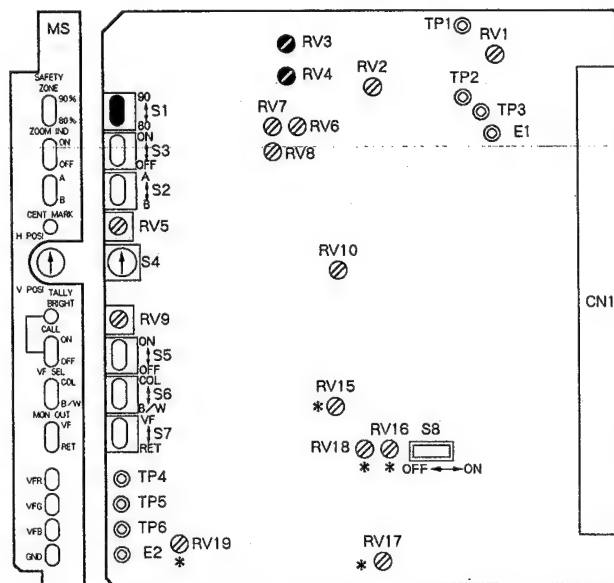
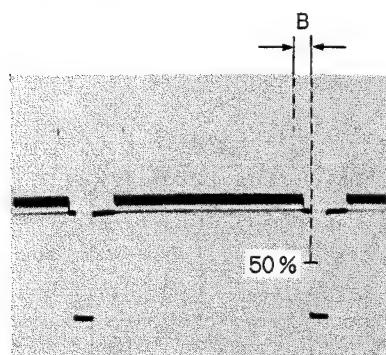
1. Adjusting point: RV3/MS-33 board

Specification: $A = 12.8 \pm 0.1 \mu s$



2. Adjusting point: RV4/MS-33 board

Specification: $B = 4.3 \pm 0.1 \mu s$



(PANEL SIDE) MS-33 BOARD (COMPONENT SIDE)

RVs identified by marking "*" are mounted on the MS-33 board with a suffix of -12.
 Suffix -11; Serial No. Up to 40210
 Suffix -12; Serial No. 40301 and higher

Note: After the adjustment, be sure to carry out "6-3. CENTER MARKER H Position Adjustment".

6-3. CENTER MARKER H POSITION ADJUSTMENT

Note: Be sure to complete the "6-2. SAFETY ZONE Adjustment".

Equipment: Oscilloscope

To be extended: MS-33 board

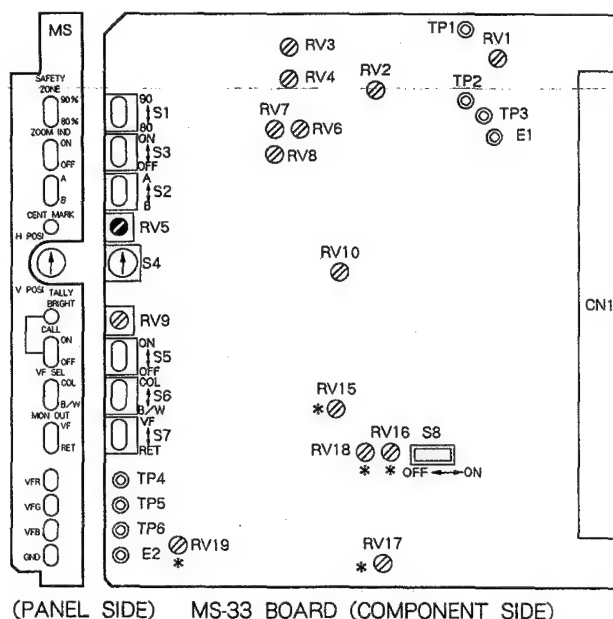
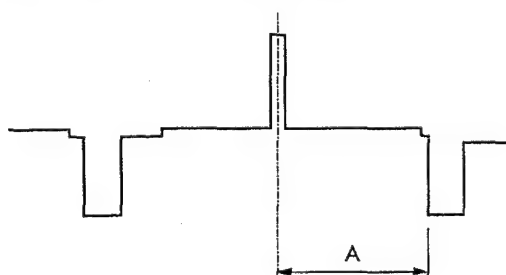
Preparation

- CLOSE button/MSU-350 → "ON"
- Video signal select button/BVP-370P (rear panel) → "G"
- SAFETY ZONE switch/BVP-370P (rear panel) → "OFF"
- CENTER MARKER switch/BVP-370P (rear panel) → "ON"
- CURSOR button/BVP-370P (rear panel) → "OFF"

Test point: TPA38 (GND;E1)/extension board

Adjusting point: ●RV5/MS-33 board

Specification: $A = 27.7 \pm 0.5 \mu s$



(PANEL SIDE) MS-33 BOARD (COMPONENT SIDE)

● RVs identified by marking " * " are mounted on the MS-33 board with a suffix of -12.
 Suffix -11; Serial No. Up to 40210
 Suffix -12; Serial No. 40301 and higher

Note: After the adjustment, perform "6-4. CURSOR Adjustment".

6-4. CURSOR ADJUSTMENT

Note: Be sure to complete the "6-3. CENTER MARKER ADJUSTMENT".

Equipment: Oscilloscope, B/W monitor

To be extended: MS-33 board

Preparation

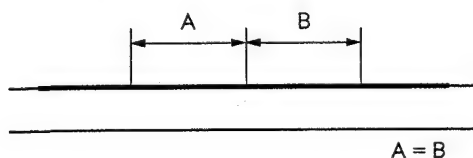
- CLOSE button/MSU-350 → "ON"
- Video signal select button/BVP-370P (rear panel) → "G"
- SAFETY ZONE switch/BVP-370P (rear panel) → "OFF"
- CENTER MARKER switch/BVP-370P (rear panel) → "ON"
- CURSOR button/BVP-370P (rear panel) → "ON"

Adjustment Procedure

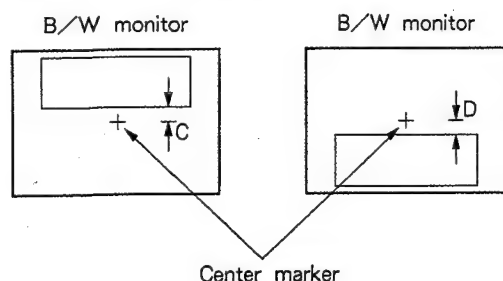
1. Adjust control knobs/(BVP-370P, rear panel) as follows.

Control knob (rear panel)	Test point (EXT. BOARD)	Specification
V-POSI	TPA10 (GND;E1)	+2.5 Vdc
HEIGHT	TPB10 (GND;E1)	+2.5 Vdc

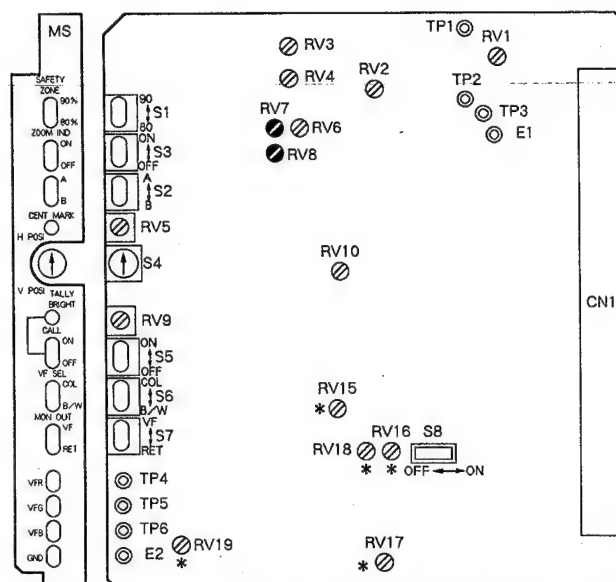
2. Test point: TPA38 (GND;E1)/extension board.
Adjust ● RV7/MS-33 board as shown below.



3. HEIGHT control knob → fully clockwise ○
4. Adjust ● RV8/MS-33 board so that C and D in figure below are equal when V-POSI control knob fully turns clockwise and counterclockwise.



5. Perform procedure 1 again.



(PANEL SIDE) MS-33 BOARD (COMPONENT SIDE)

● RVs identified by marking " * " are mounted on the MS-33 board with a suffix of -12.

Suffix -11; Serial No. Up to 40210

Suffix -12; Serial No. 40301 and higher

Note: After the adjustment, set switch and button as follows.

- CENTER MARKER switch/BVP-370P (rear panel) → "OFF"
- CURSOR button/BVP-370P (rear panel) → "OFF"

Serial No. 40301 and higher

6-5. VF R/G/B LEVEL ADJUSTMENT

Note: Make sure that the adjustment of "STEP 1. POWER SUPPLY SYSTEM ADJUSTMENT" through "STEP 4. DETAIL SIGNAL SYSTEM ADJUSTMENT" must be done.

Equipment: Oscilloscope

To be extended: MS-33 board

Preparation

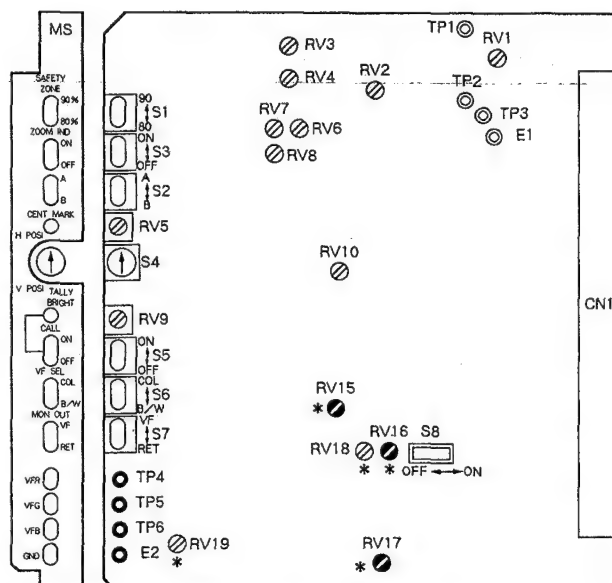
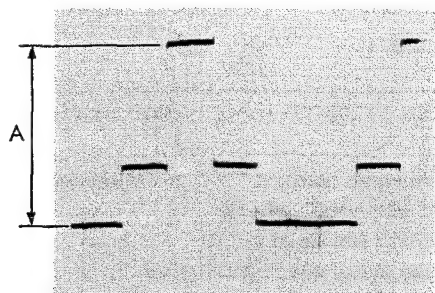
- TEST 2 button/MSU-350 → "ON"

Adjustment Procedures

- Perform adjustment in order of G, R and B with the video signal select button.

MS-33 board (GND;E2)

	Test point	Adj. point	Specification
G-ch	TP5	RV16	$A=700 \pm 10 \text{ mVp-p}$
R-ch	TP4	RV15	
B-ch	TP6	RV17	



(PANEL SIDE) MS-33 BOARD (COMPONENT SIDE)

RVs identified by marking " * " are mounted on the MS-33 board with a suffix of -12.
 Suffix -11; Serial No. Up to 40210
 Suffix -12; Serial No. 40301 and higher

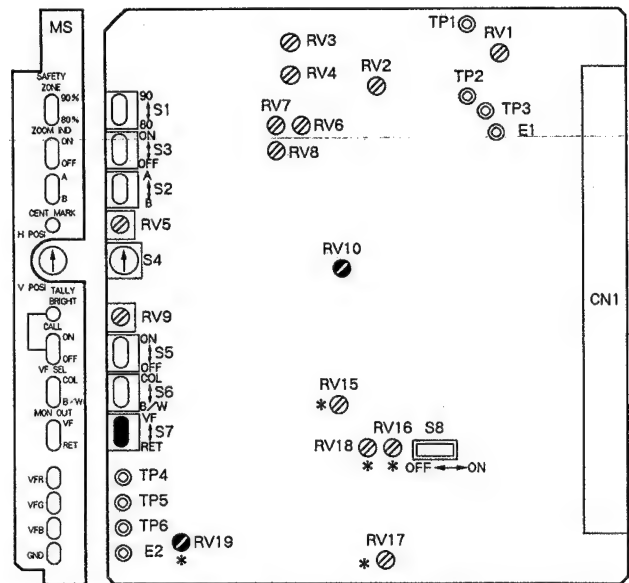
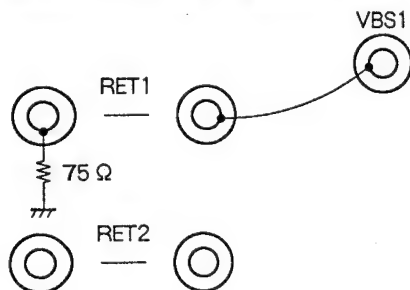
6-6. RETURN VIDEO LEVEL ADJUSTMENT

Equipment: Oscilloscope

To be extended: MS-33 board

Preparation

- BARS button/MSU-350 → "ON"
- RET1 button/BVP-370P (rear panel) → "ON"
- S7 (MONITOR SELECT)/MS-33 board → "RET"
- Connect between RET1 and VBS1 connection with a BNC cable on CCU-370P rear panel.



(PANEL SIDE) MS-33 BOARD (COMPONENT SIDE)

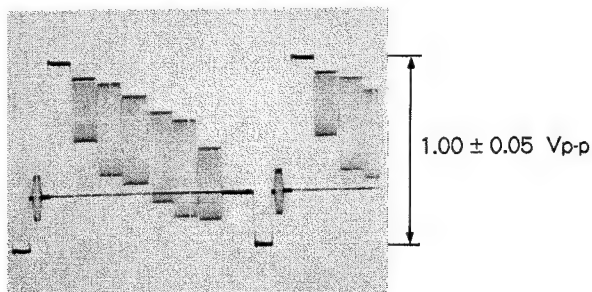
● RVs identified by marking " * " are mounted on the MS-33 board with a suffix of -12.
Suffix -11; Serial No. Up to 40210
Suffix -12; Serial No. 40301 and higher

Serial No. Up to 40210

Adjustment Procedures

Test point: TPA37 (GND;E1)/extension board

Adjusting point: ● RV10/MS-33 board

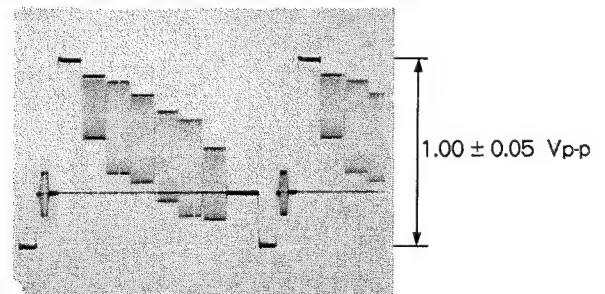


Serial No. 40301 and higher

Adjustment Procedures

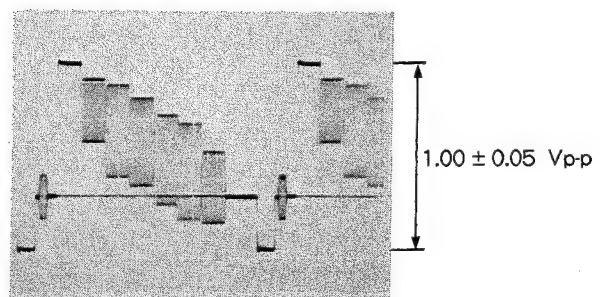
1. Test point: TPA37 (GND;E1)/extension board

Adjusting point: ● RV10/MS-33 board



2. Test point: TPA38 (GND;E1)/extension board

Adjusting point: ● RV19/MS-33 board



Note: After the adjustment, set switch as follows.

- S7 (MONITOR SELECT)/MS-33 board → "VF"

STEP 7. TRIAX INTERFACE SYSTEM ADJUSTMENT

7-1. MD-67 BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the MD-67 board.

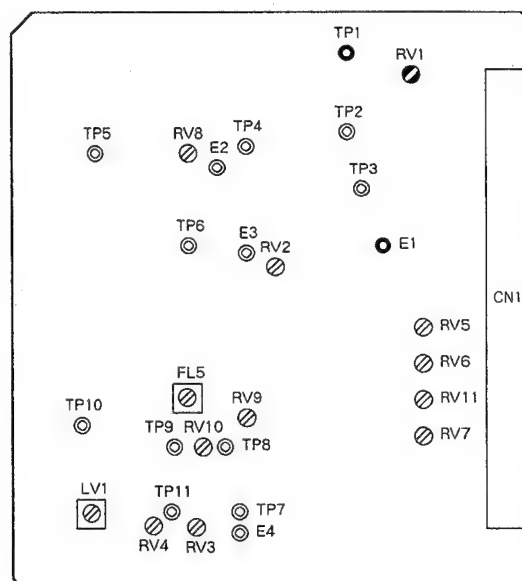
Therefore, when this adjustment is carried out, all of following adjustments in TRIAX INTERFACE SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

Equipment: Digital voltmeter
To be extended: MD-67 board
Test point: TP2 (GND;E1)/MD-67 board
Adjusting point: RV1/MD-67 board
Specification: $+5.0 \pm 0.02$ Vdc

Adjustment Procedures

- Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.



MD-67 BOARD (COMPONENT SIDE)

7-2. FL-89 BOARD +9V ADJUSTMENT

Note: This adjustment influences operation of the FL-89 board.

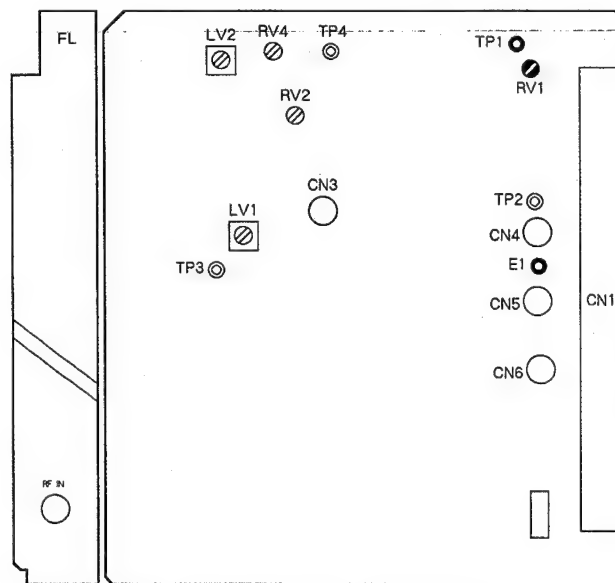
Therefore, when this adjustment is carried out, all of following adjustments in TRIAX INTERFACE SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

Equipment: Digital voltmeter
To be extended: FL-89 board
Test point: TP1 (GND;E1)/FL-89 board
Adjusting point: RV1/FL-89 board
Specification: $+9.0 \pm 0.02$ Vdc

Adjustment Procedures

- Perform adjustment when measured voltage is more than $\pm 1\%$ with respect to the specified voltage.

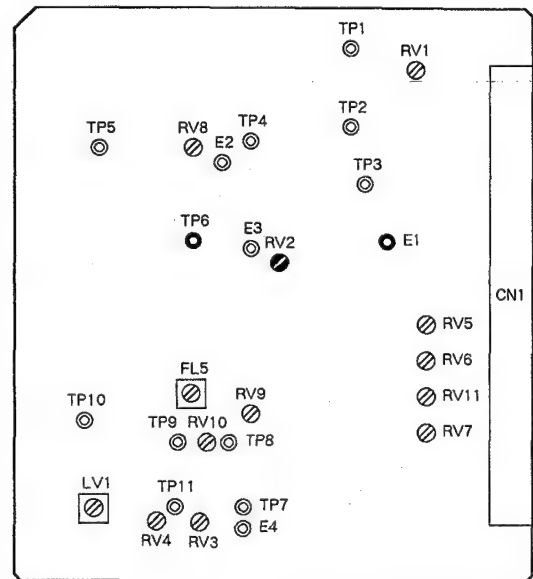


(PANEL SIDE) FL-89 BOARD (COMPONENT SIDE)

7-3. 36 MHz FREQUENCY ADJUSTMENT

Note: Before adjustment, allow for more than 10 minutes warm-up time.

Equipment: Frequency counter
To be extended: MD-67 board
Test point: TP6 (GND;E1)/MD-67 board
Adjusting point: ● RV2/MD-67 board
Specification: 36,000,000 \pm 10 Hz



MD-67 BOARD (COMPONENT SIDE)

7-4. Y REF LEVEL ADJUSTMENT

Note: Make sure that the adjustment of "STEP 1. POWER SUPPLY SYSTEM ADJUSTMENT" through "STEP 5. AUTO CONTROL SYSTEM ADJUSTMENT" must be done.

Equipment: Oscilloscope

To be extended: MD-67 board

Preparation

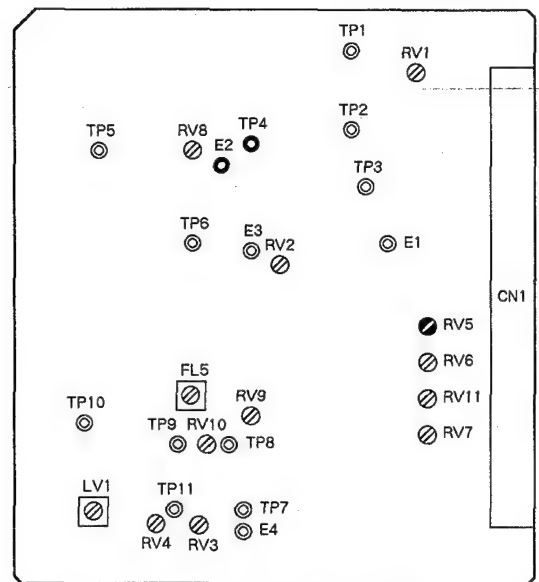
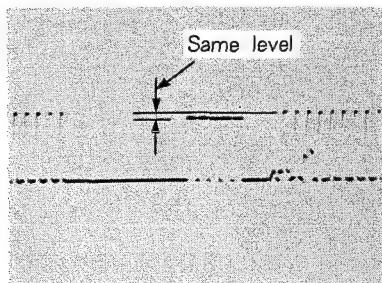
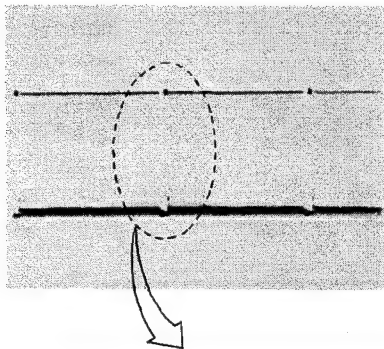
- Button switch of MSU-350 must be set the initial setting, and set the buttons as follows.

TEST 1 button/MSU-350 → "ON"

KNEE OFF button/MSU-350 → "ON" (light up)

Test point: TP4 (GND;E2)/MD-67 board

Adjusting point: RV5 (Y REF LEV)/MD-67 board



MD-67 BOARD (COMPONENT SIDE)

7-5. Y CARRIER BALANCE ADJUSTMENT

Note: Make sure that the adjustment of "STEP 1. POWER SUPPLY SYSTEM ADJUSTMENT" through "STEP 5. AUTO CONTROL SYSTEM ADJUSTMENT" must be done.

Equipment: Oscilloscope (DC mode)

To be extended: MD-67 board

Preparation

- Button switch of MSU-350 must be set the initial setting, and set the buttons as follows.

TEST 1 button/MSU-350 → "ON"

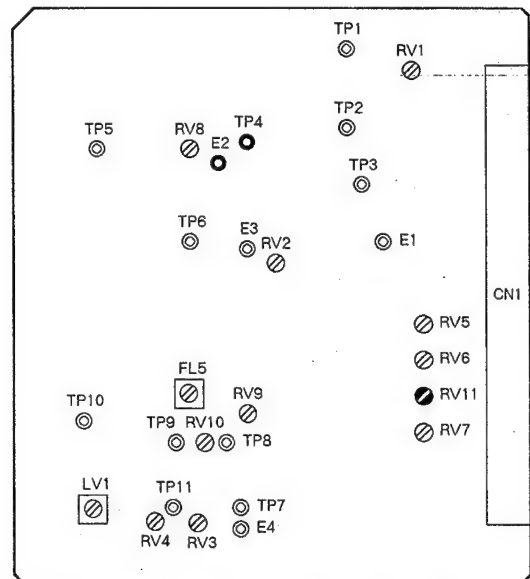
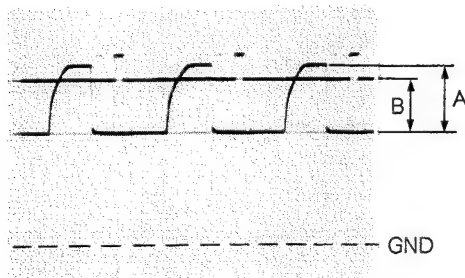
KNEE OFF button/MSU-350 → "ON" (light up)

Test point: TP4 (GND;E2)/MD-67 board
IC2-pin4 (GND;E2)/MD-67 board

Adjusting point: RV11/MD-67 board

Adjustment Procedures

1. Connect a CH-1 probe of oscilloscope to TP4 and a CH-2 probe of oscilloscope to IC2-pin 4.
2. Select the same input VOLTS/DIV on both channels (CH-1, CH-2), and adjust the ground level to the same position, close to the bottom of the screen.
3. Observe TP4 (GND;E2) and measure the value of A as shown below.
4. Adjust RV11 so that the DC level at IC2-pin 4, B is $80 \pm 10\%$ of A.



MD-67 BOARD (COMPONENT SIDE)

7-6. Y DC BALANCE ADJUSTMENT

Equipment: Oscilloscope

To be extended: MD-67 board

Preparation

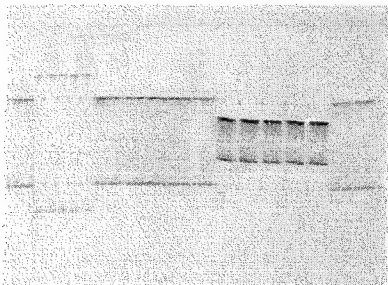
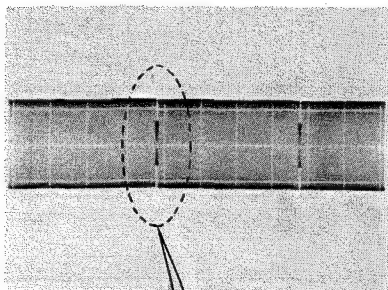
- CLOSE button/MSU-350 → "ON"

Test point: TP5 (GND;E1)/MD-67 board

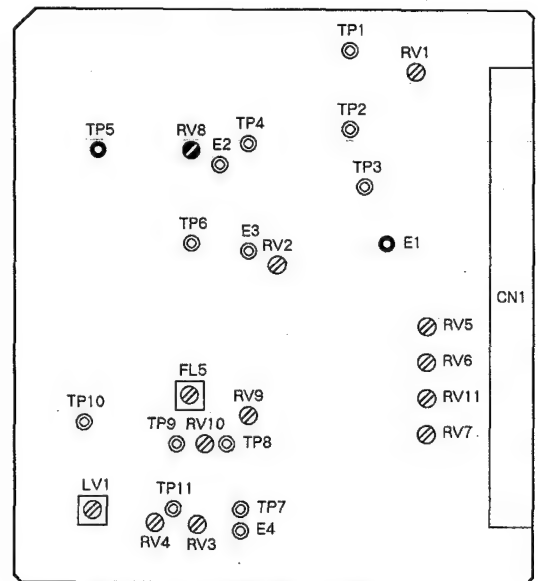
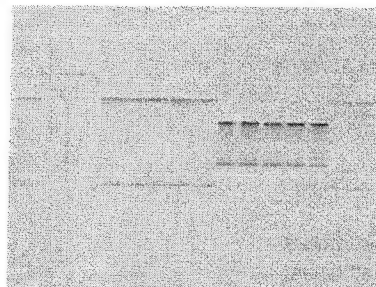
Adjusting point: RV8/MD-67-board

Adjustment Procedures

- Adjust RV8 so that the waveform at TP5 is flat in V BLKG period.



Flat waveform



MD-67 BOARD (COMPONENT SIDE)

7-7. R-Y REF LEVEL ADJUSTMENT

Equipment: Oscilloscope

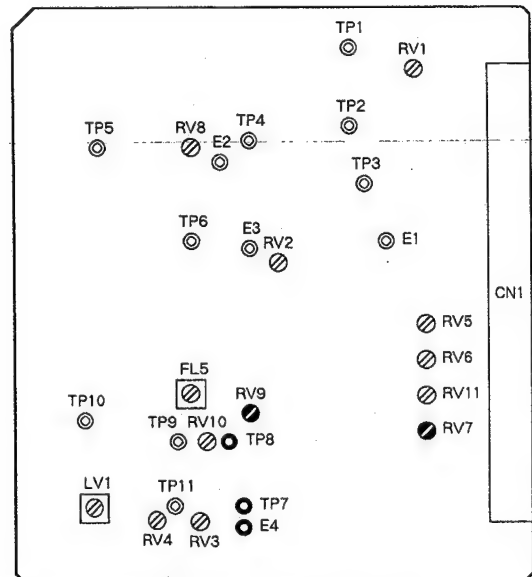
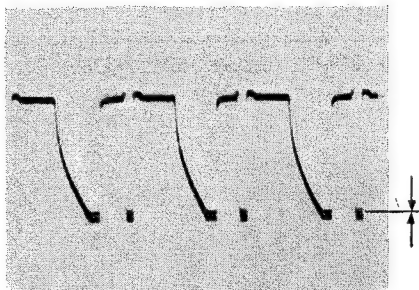
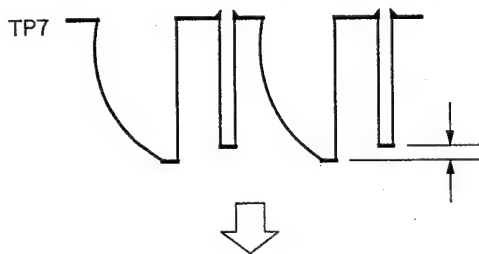
To be extended: MD-67 board

Preparation

- TEST 1 button/MSU-350 → "ON"
- S1 (R ON/OFF)/SG-167P board → "OFF"

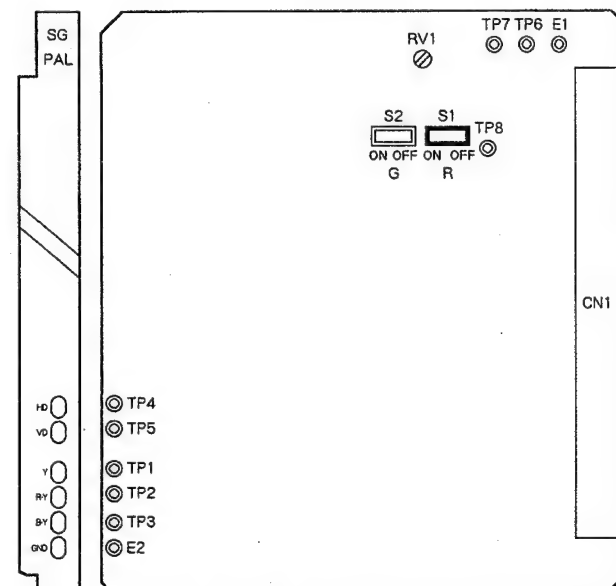
Adjustment Procedures

1. Test point: TP7 (GND;E4) /MD-67 board
Adjusting point: RV7 (R-Y REF LEV)/MD-67 board



MD-67 BOARD (COMPONENT SIDE)

2. Test point: TP8 (GND;E4)/MD-67 board
TP7 (GND;E4)/MD-67 board
Adjusting point: RV9 (R-Y CAR BAL)/MD-67 board
Specification: A=0 mVdc



(PANEL SIDE) SG-167P BOARD (COMPONENT SIDE)

Note: After the adjustment, set button and switch as follows.
TEST 1 button/MSU-350 → "OFF"
S1 (R ON/OFF)/SG-167P board → "ON"

7-8. B-Y REF LEVEL ADJUSTMENT

Equipment: Oscilloscope

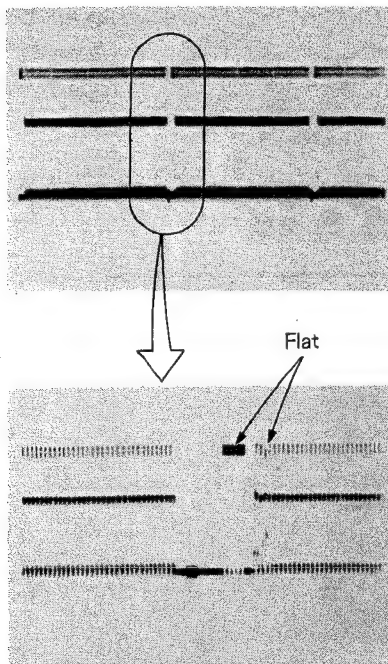
To be extended: MD-67 board

Preparation

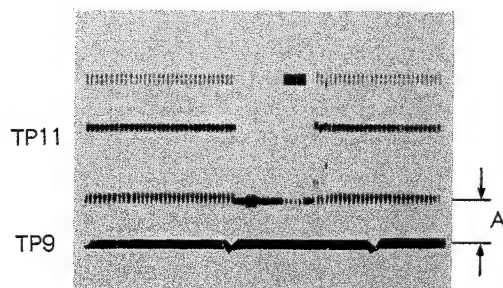
- TEST 1 button/MSU-350 → "ON"
- S1 (R ON/OFF)/SG-167P board → "OFF"
- S2 (G ON/OFF)/SG-167P board → "OFF"

Adjustment Procedures

1. Test point: TP11 (GND;E4)/MD-67 board
Adjusting point: RV6 (B-Y REF LEV)/MD-67 board

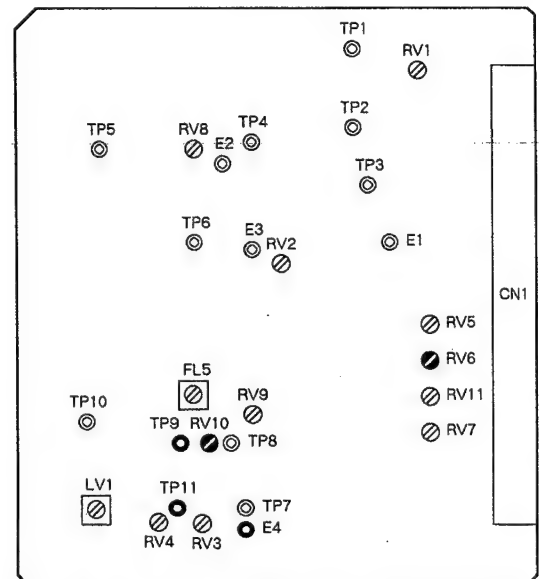


2. Test point: TP11 (GND;E4)/MD-67 board
TP9 (GND;E4)/MD-67 board
Adjusting point: RV10 (B-Y CAR BAL)/MD-67 board
Specification: A=0 mVdc

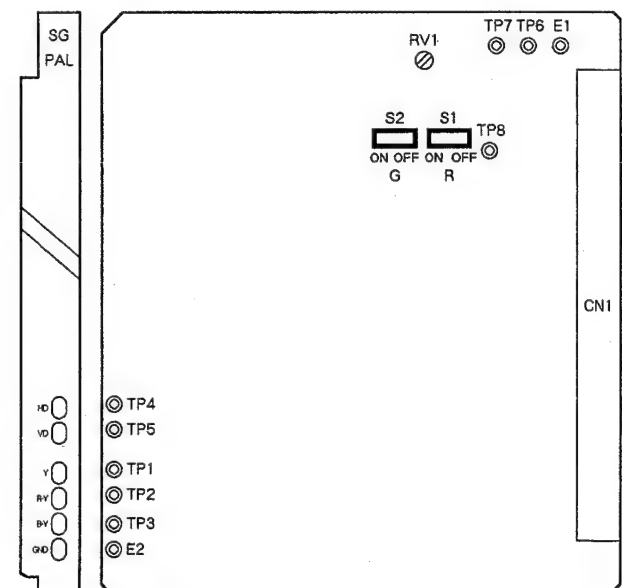


Note: After the adjustment, set button and switch as follows.

- TEST 1 button/MSU-350 → "OFF"
- S1 (R ON/OFF)/SG-167P board → "ON"
- S2 (G ON/OFF)/SG-167P board → "ON"



MD-67 BOARD (COMPONENT SIDE)



(PANEL SIDE) SG-167P BOARD (COMPONENT SIDE)

7-11. 72 MHz TRAP ADJUSTMENT

Note: Perform the adjustment only when changing a part.

Equipment: Spectrum analyzer

To be extended: MD-67 board

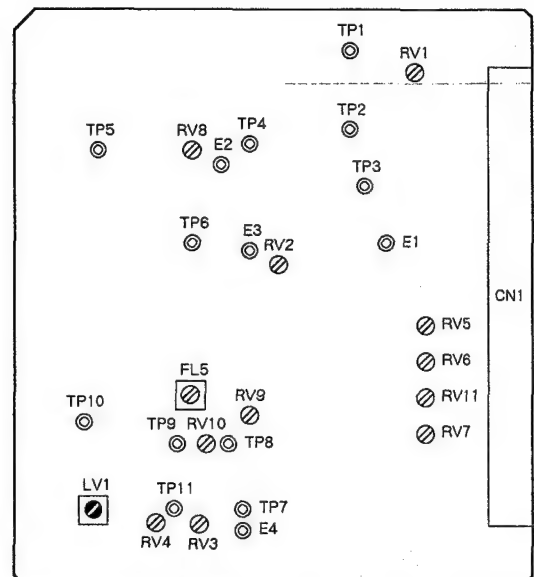
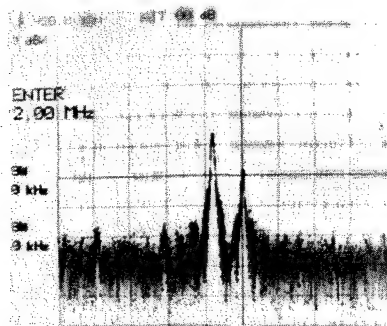
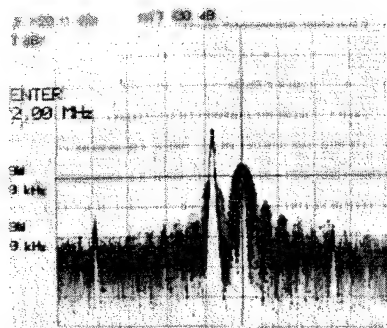
Preparation

- CLOSE button/MSU-350 → "ON"

Adjustment Procedure

- Adjust ☒ LV1/MD-67 board so that the 72 MHz frequency at TPA23 (GND;TPB23) on the MD-67 board is minimum.

CENTER FREQ. 72 MHz
SPAN 5 MHz



MD-67 BOARD (COMPONENT SIDE)

7-12. RETURN VIDEO FREQUENCY ADJUSTMENT (1)

Note: Perform the adjustment only when changing a part.

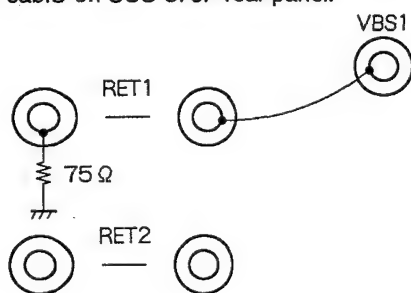
When adjusting this step, the length of triaxial cable is required 600–1000m.

Equipment: Oscilloscope

To be extended: FL-89 board

Preparation

- CLOSE button/MSU-350 → "ON"
- RET 1 button/BVP-370P (rear panel) → "ON"
- Connect between RET1 and VBS1 connector with a BNC cable on CCU-370P rear panel.

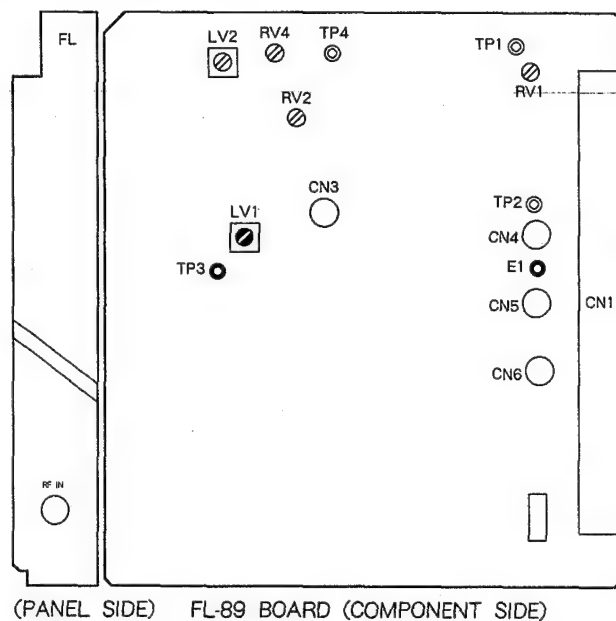
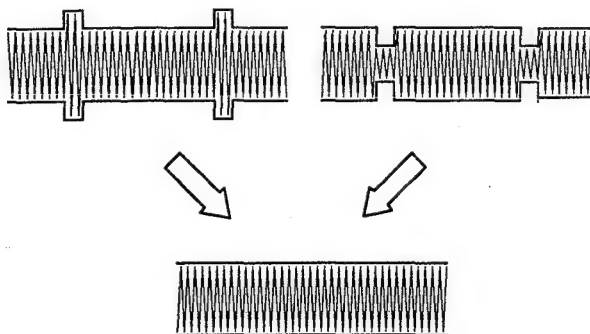


Test point: TP3 (GND;E1)/FL-89 board

Adjusting point: LV1/FL-89 board

Adjustment Procedures

- Adjust the waveform level at TP3 for flat.



(PANEL SIDE) FL-89 BOARD (COMPONENT SIDE)

8-4. INCOM 1 DEVIATION ADJUSTMENT

Equipment: Spectrum analyzer, Oscilloscope,
Audio generator

To be extended: AU-129P board

Preparation

- MIC (PROD/OFF/ENG) switch
/BVP-370P (rear panel) \Rightarrow "ENG"

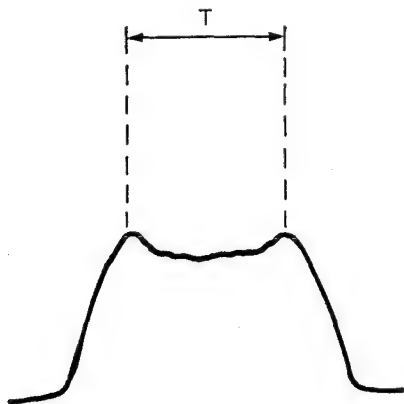
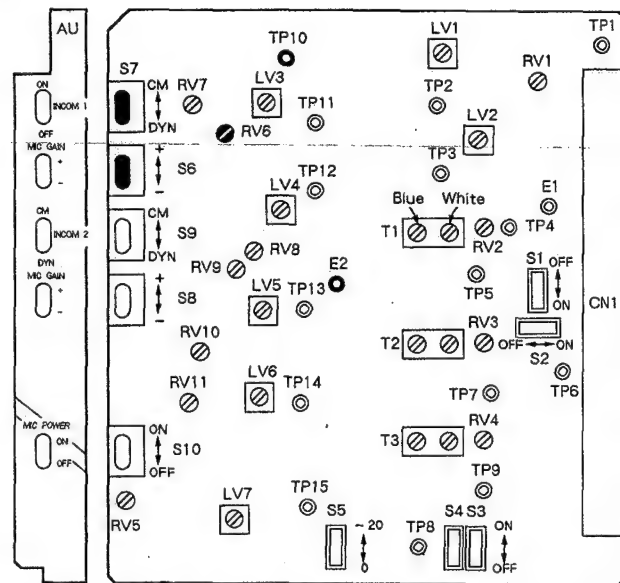
Test point: TP10 (GND;E2)/AU-129P board

Adjusting point: \bullet RV6 (INCOM 1 DEV)/AU-129P board

Specification: $T=20.0 \pm 0.5$ kHz

Adjustment Procedures

1. S6 (MIC GAIN)/AU-129P board \rightarrow "0"
S7 (INCOM 1)/AU-129P board \rightarrow "CM"
2. Feed the following signal to TPA35 (X) and TPA37 (GND) on the extension board. ...Fig. 1 (Refer to 5-1-2. audio connection)
Signal: Sine wave
Frequency: 1 kHz
Output level: 220 mVp-p
3. Connect a probe of spectrum analyzer to TP10, and adjust \bullet RV6 so that T is 20.0 ± 0.5 kHz.



CENT FREQ: 7.1 MHz
FREQ SPAN: 50 kHz

8-5. INCOM 2 DEVIATION ADJUSTMENT

Equipment: Spectrum analyzer, Oscilloscope,
Audio generator

To be extended: AU-129P board

Preparation

- MIC (PROD/OFF/ENG) switch
/BVP-370P (rear panel) → "PROD"

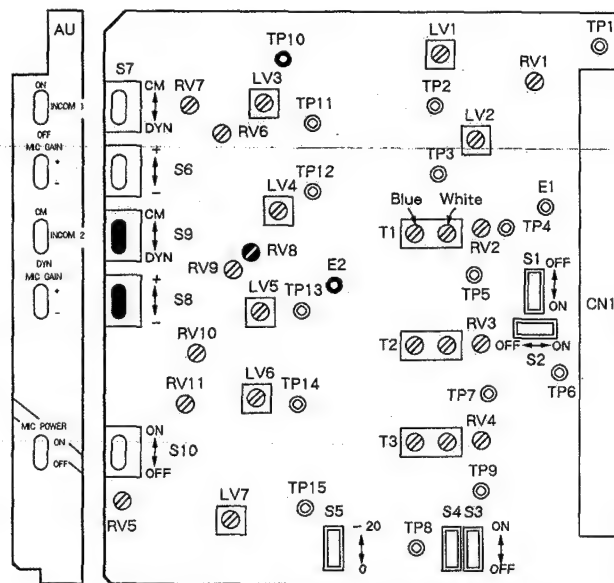
Test point: TP10 (GND;E2)/AU-129P board

Adjusting point: RV8 (INCOM 2 DEV)/AU-129P board

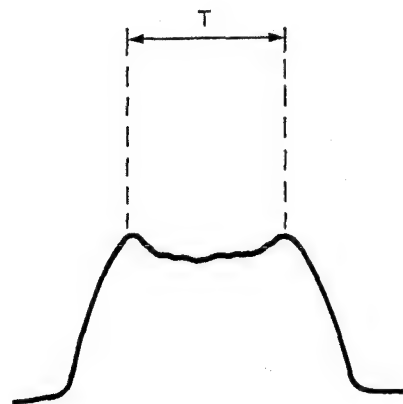
Specification: $T = 20.0 \pm 0.5$ kHz

Adjustment Procedures

1. S8 (MIC GAIN)/AU-129P board → "0"
S9 (INCOM 2)/AU-129P board → "CM"
2. Feed the following signal to TPA36 (X) and TPA37 (GND) on the extension board. ...Fig. 1 (Refer to 5-1-2. audio connection)
Signal: Sine wave
Frequency: 1 kHz
Output level: 220 mVp-p
3. Connect a probe of spectrum analyzer to TP10, and adjust RV8 so that T is 20.0 ± 0.5 kHz.



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



CENT FREQ: 7.4 MHz
FREQ SPAN: 50 kHz

8-6. MIC 1 DEVIATION ADJUSTMENT

Equipment: Spectrum analyzer, Oscilloscope, Audio generator

To be extended: AU-129P board

Preparation

- S51 switch/AT-55B board (CCU-370P) → "NORMAL"
- S55 (REMOTE/LOCAL) switch
/AT-55B board (CCU-370P) → "LOCAL"

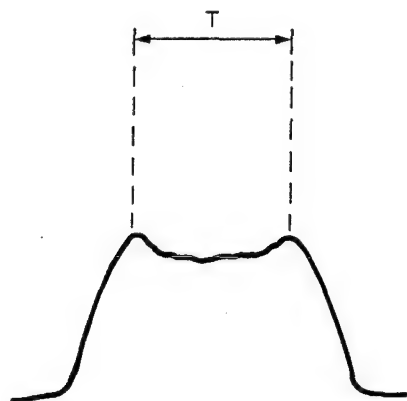
Test point: TP10 (GND;E2)/AU-129P board

Adjusting point: ●RV10 (MIC 1 DEV)/AU-129P board

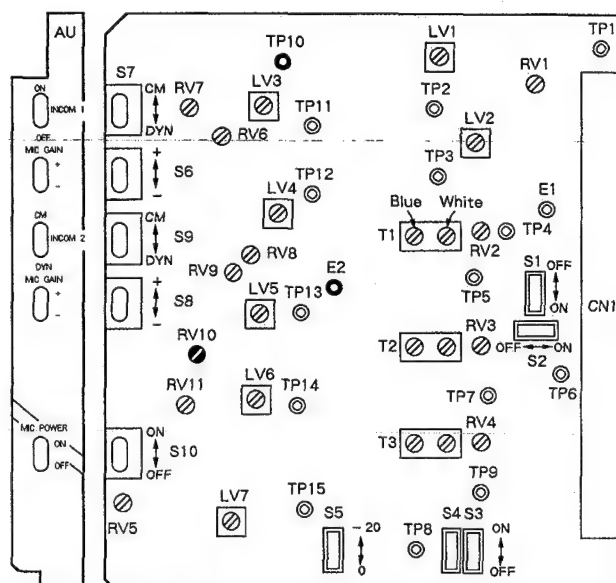
Specification: $T=16.0 \pm 0.5$ kHz

Adjustment Procedures

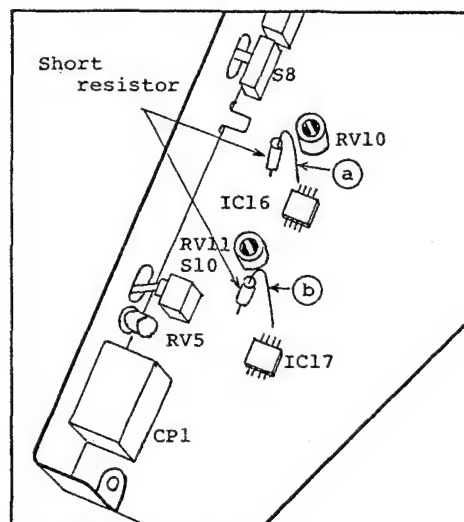
1. Input the 1 kHz sine-wave signal to TPB15 (X), TPA16 (Y) and TPB17 (GND) on the extension board/AU-129P board. ...Fig. 2 (Refer to 5-1-2. audio connection)
2. Connect a probe of oscilloscope to portion @ as shown below, and adjust the level control of audio generator so that the audio level at its point is 270 mVp-p.
3. Connect a probe of spectrum analyzer to TP10, and adjust \odot RV10 so that T is 16.0 ± 0.5 kHz.



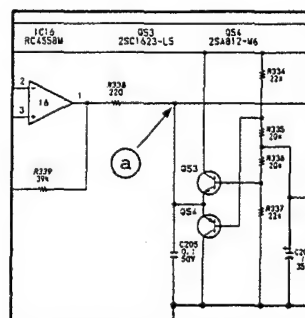
CENT FREQ: 6.0 MHz
FREQ SPAN: 30 kHz



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AU-129P BOARD/BVP-370P



8-7. MIC 2 DEVIATION ADJUSTMENT

Equipment: Spectrum analyzer, Oscilloscope,
Audio generator

To be extended: AU-129P board

Preparation

- S52 switch/AT-55B board (CCU-370P) → "NORMAL"
- S55 (REMOTE/LOCAL) switch
/AT-55B board (CCU-370P) → "LOCAL"

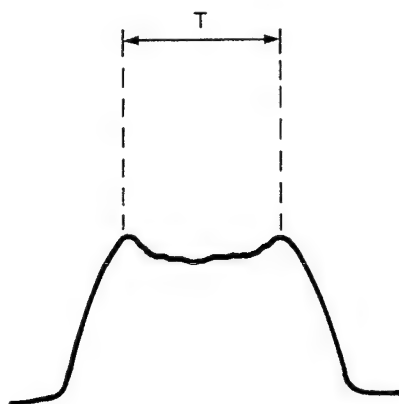
Test point: TP10 (GND;E2)/AU-129P board

Adjusting point: RV11 (MIC 2 DEV)/AU-129P board

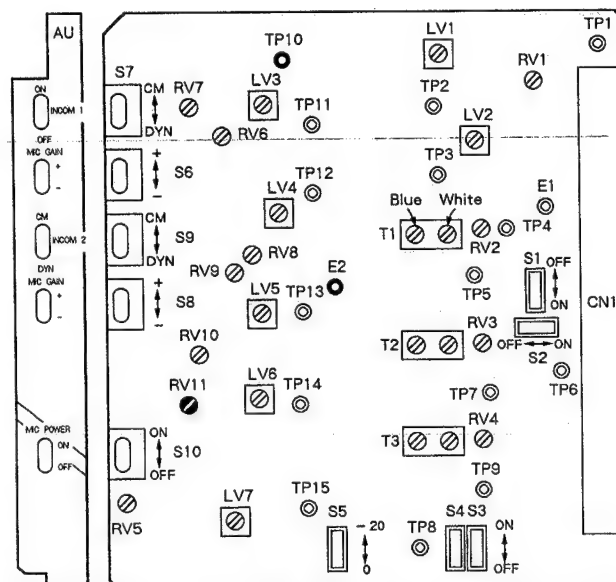
Specification: $T = 18.0 \pm 0.5$ kHz

Adjustment Procedures

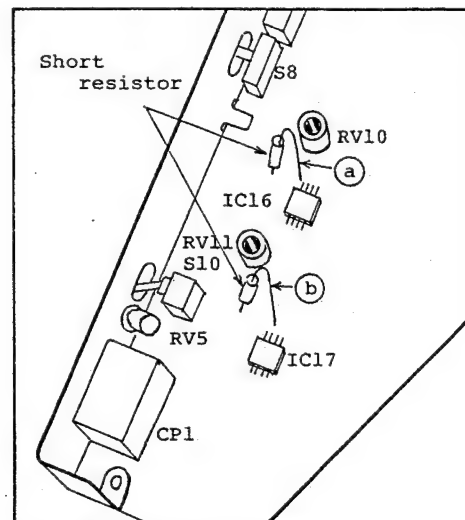
1. Input the 1 kHz sine-wave signal to TPB16 (X), TPA17 (Y) and TPB17 (GND) on the extension board/AU-129P board. ...Fig. 2 (Refer to 5-1-2. audio connection)
2. Connect a probe of oscilloscope to portion ⑥ as shown below, and adjust the level control of audio generator so that the audio level at its point is 270 mVp-p.
3. Connect a probe of spectrum analyzer to TP10, and adjust RV11 so that T is 18.0 ± 0.5 kHz.



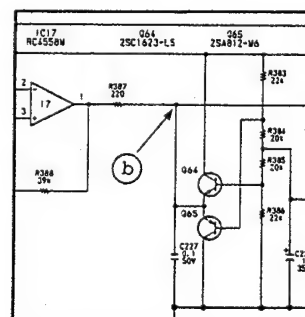
CENT FREQ: 6.7 MHz
FREQ SPAN: 50 kHz



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AU-129P BOARD/BVP-370P



8-8. INCOM 1 SIDE TONE ADJUSTMENT

Equipment: Oscilloscope, Audio generator

To be extended: AU-129P board

Preparation

- MIC (PROD/OFF/ENG) switch /BVP-370P (rear panel) → "ENG"

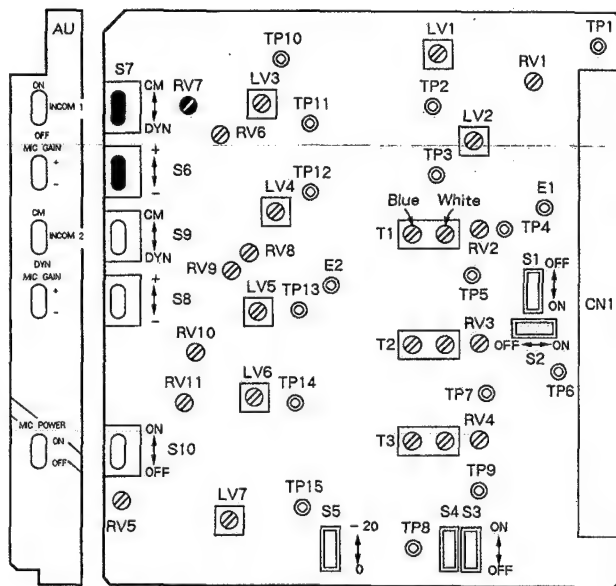
- RV7/AU-129P board → fully clockwise

Test point: TPA29 (GND;E1)/extension board

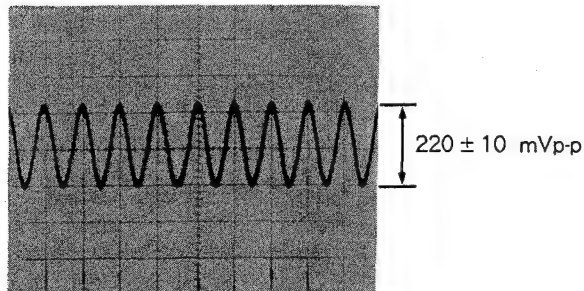
Adjusting point: RV7/AU-129P board

Adjustment Procedures

1. S6 (MIC GAIN)/AU-129P board → "0"
S7 (INCOM 1)/AU-129P board → "CM"
2. Feed the following signal to TPA35 (x) and TPA37 (GND) on the extension board. ...Fig. 1 (Refer to 5-1-2. audio connection)
Signal: Sine wave
Frequency: 1 kHz
Output level: 220 mVp-p
3. Adjust INCOM 1 control/BVP-370P (rear panel) so that a level on the TPA29 (GND;E1)/extension board is 2.2 Vp-p.
4. Adjust RV7/AU-129P board so that a level on TPA29 (GND;E1)/extension board is 220 mVp-p.



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



8-9. INCOM 1 DEMOD. ADJUSTMENT

Note: Perform the adjustment only when replacing a part.

Equipment: Oscilloscope, Audio generator

To be extended: AU-129P board

Preparation

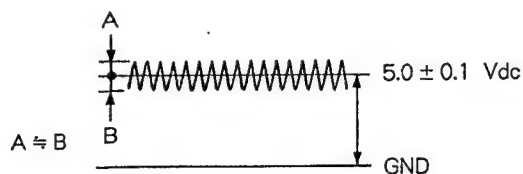
- MIC (PROD/OFF/ENG) switch
/BVP-370P (rear panel) → "ENG"
- Extend AT-55B board/CCU-370P with extension board.
- INCOM (PROD/PRIV/ENG) switch
/CCU-370P (front panel) → "ENG"

Test point: TP7 (GND;E1)/AU-129P board

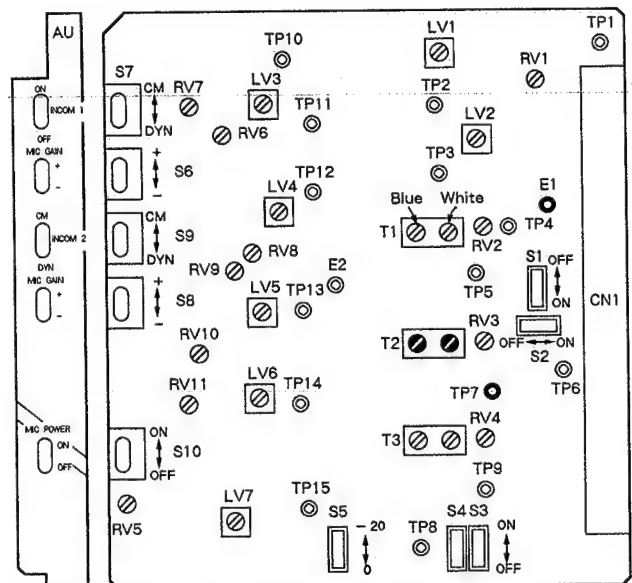
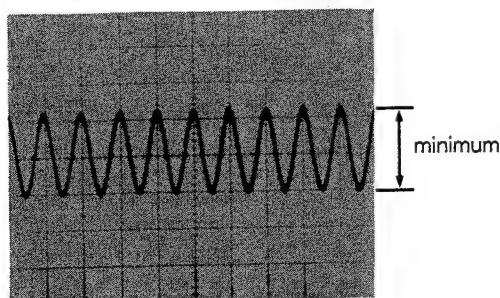
Adjusting point: T2/AU-129P board

Adjustment Procedures

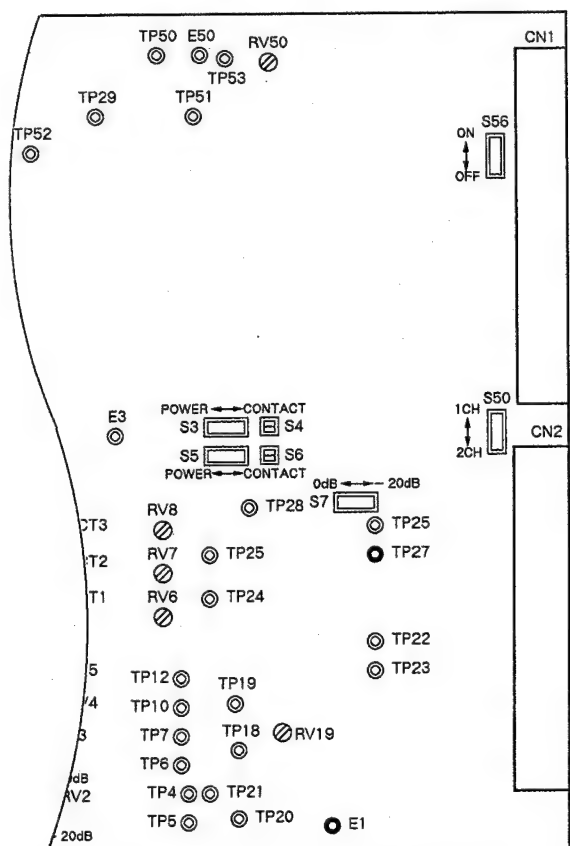
1. Input the 1 kHz sine-wave signal to CN2-TPB22 (X), TPA22 (Y) and TPB21 (GND) on the extension board/AT-55B board. ...Fig. 2 (Refer to 5-1-2. audio connection)
2. Adjust the level control of audio generator so that the audio level at TP27 (GND;E1)/AT-55B board is 200 mVp-p.
3. Connect a probe of oscilloscope to TP7/AU-129P board.
4. Adjust a white core of T2/AU-129P board slowly, and the sine-wave appears near 5.0 Vdc, and then readjust it so that A and B on the 5.0 Vdc are nearly equal.



5. Set the input AC/DC mode on the oscilloscope to "AC" mode, and adjust a blue core of T2/AU-129P board so that the sine-wave is minimum.



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AT-55A/AT-55B BOARD (COMPONENT SIDE)

8-10. INCOM 1 LEVEL ADJUSTMENT

Equipment: Oscilloscope, Audio generator

To be extended: AU-129P board

Preparation

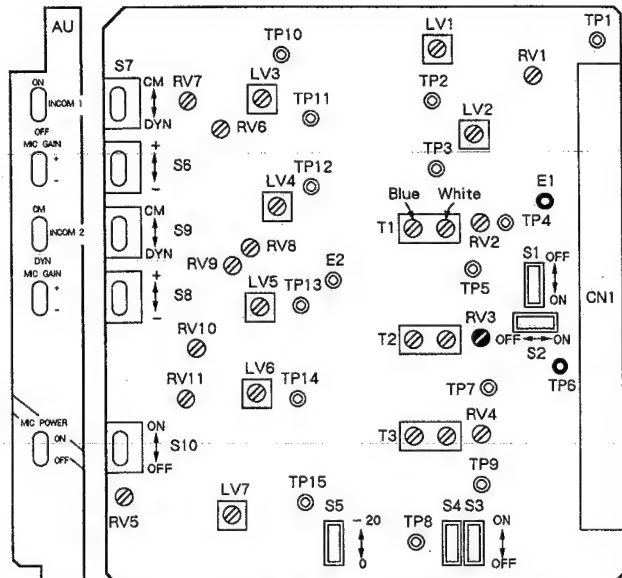
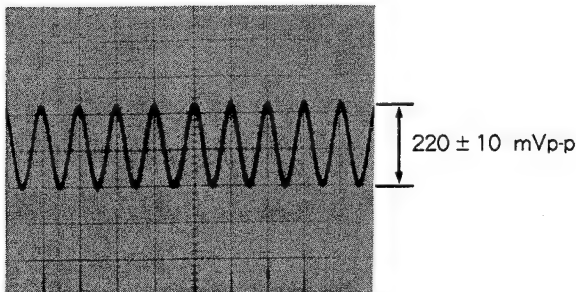
- MIC (PROD/OFF/ENG) switch
/BVP-370P (rear panel) → "ENG"
- Extend AT-55B board/CCU-370P with extension board.
- INCOM (PROD/PRIV/ENG) switch
/CCU-370P (front panel) → "ENG"

Test point: TP6 (GND;E1)/AU-129P board

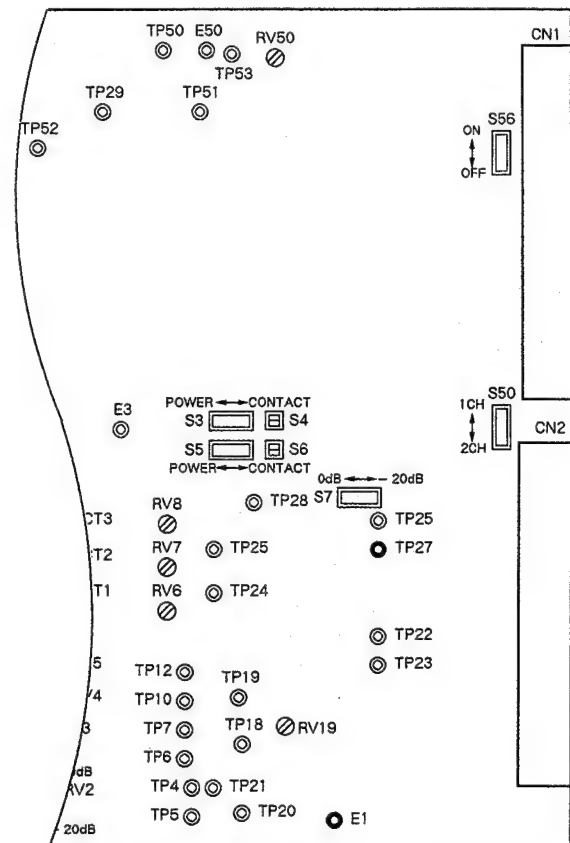
Adjusting point: RV3 (INCOM 1 LEV)/AU-129P board

Adjustment Procedures

- (For 4W intercom system)
 - Input 1 kHz sine-wave signal to CN2-TPB22 (X), TPA22 (Y) and TPB21 (GND)/extension board. ...Fig. 2 (Refer to 4-1-3. audio connection)
 (For 2W intercom system)
 - Input 1 kHz sine-wave signal to CN2-TPA24 (x) and TPA23 (GND)/extension board. ...Fig. 1 (Refer to 4-1-3. audio connection)
- Adjust the level control of audio generator so that the audio level at TP27 (GND;E1)/AT-55B board is 200 mVp-p.
- Adjust RV3/AU-129P board so that a level on the TP6/AU-129P board is 220 mVp-p.



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AT-55A/AT-55B BOARD (COMPONENT SIDE)

8-11. INCOM 2 SIDE TONE ADJUSTMENT

Equipment: Oscilloscope, Audio generator

To be extended: AU-129P board

Preparation

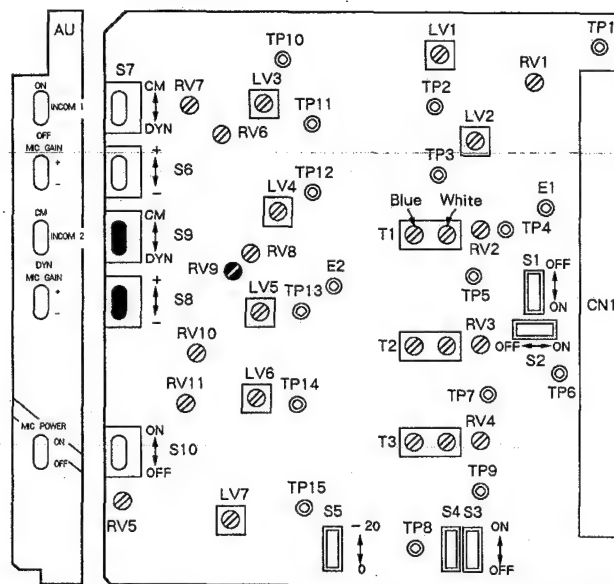
- MIC (PROD/OFF/ENG) switch /BVP-370P (rear panel) → "PROD"
- RV9/AU-129P board → fully clockwise

Test point: TPB30 (GND;E1)/extension board

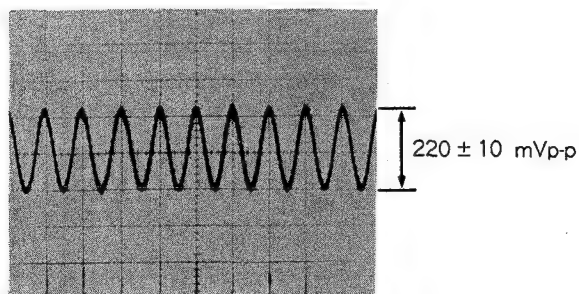
Adjusting point: RV9/AU-129P board

Adjustment Procedures

1. S8 (MIC GAIN)/AU-129P board → "0"
S9 (INCOM 2)/AU-129P board → "CM"
2. Feed the following signal to TPB36 (X) and TPA37 (GND) on the extension board. ...Fig. 1 (Refer to 5-1-2. audio connection)
Signal: Sine wave
Frequency: 1 kHz
Output level: 220 mVp-p
3. Adjust INCOM 2 control/BVP-370P (rear panel) so that a level on the TPB30 (GND;E1)/extension board is 2.2 Vp-p.
4. Adjust RV9/AU-129P board so that a level at TPB30 (GND;E1)/extension board is 220 mVp-p.



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



8-12. INCOM 2 DEMOD. ADJUSTMENT

Note: Perform the adjustment only when replacing a part.

Equipment: Oscilloscope, Audio generator

To be extended: AU-129P board

Preparation

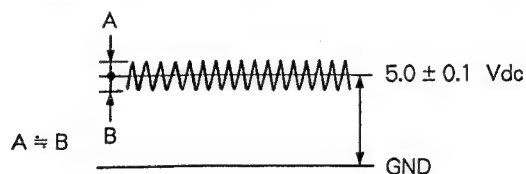
- MIC (PROD/OFF/ENG) switch
/BVP-370P (rear panel) → "PROD"
- Extend AT-55B board/CCU-370P with extension board.
- INCOM (PROD/PRIVE/ENG) switch
/CCU-370P (front panel) → "PROD"

Test point: TP9 (GND;E1)/AU-129P board

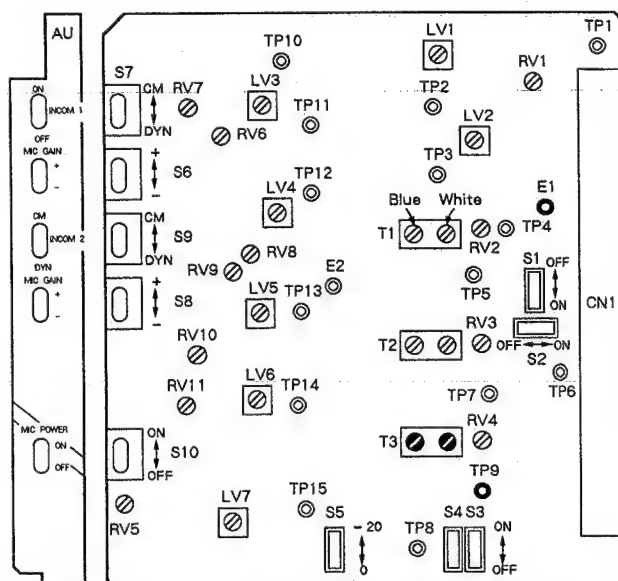
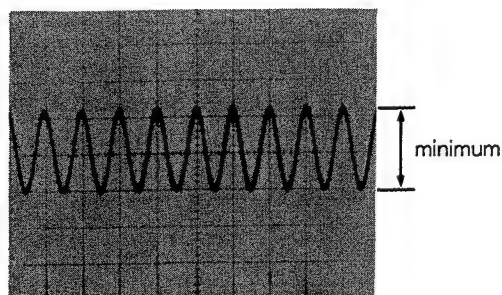
Adjusting point: T3/AU-129P board

Adjustment Procedures

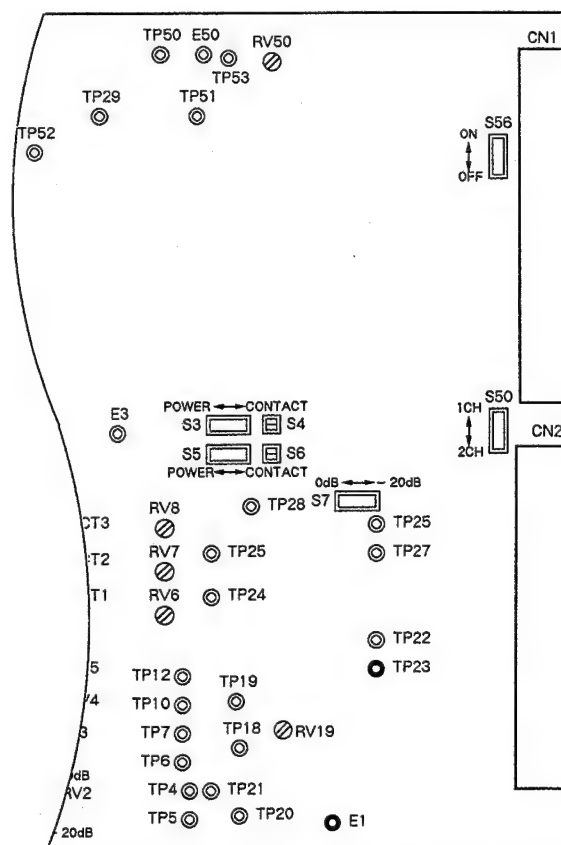
1. Input the 1 kHz sine-wave signal to CN2-TPB19 (X), TPA19 (Y) and TPB18 (GND) on the extension board/AT-55B board. ...Fig. 2 (Refer to 5-1-2. audio connection)
2. Adjust the level control of audio generator so that the audio level at TP23 (GND;E1)/AT-55B board is 200 mVp-p.
3. Connect a probe of oscilloscope to TP9/AU-129P board.
4. Adjust a white core of T3/AU-129P board slowly, and the sine-wave appears near 5.0 Vdc, and then readjust it so that A and B on the 5.0 Vdc are nearly equal.



5. Set the input AC/DC mode on the oscilloscope to "AC" mode, and adjust a blue core of T3/AU-129P board so that the sine-wave is minimum.



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AT-55A/AT-55B BOARD (COMPONENT SIDE)

5. ALIGNMENT

8-14. PGM DEMOD. ADJUSTMENT

Note: Perform the adjustment only when replacing a part.

Equipment: Oscilloscope, Audio generator

To be extended: AU-129P board

Preparation

- Extended AT-55B board/CCU-370P with extension board.

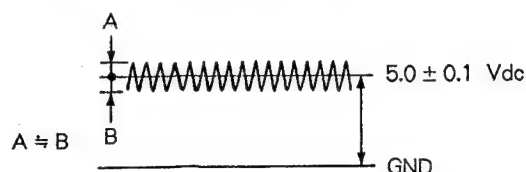
- S7 (0 dB/ - 20dB) switch/AT-55B board → "0 dB"

Test point: TP5 (GND;E1)/AU-129P board

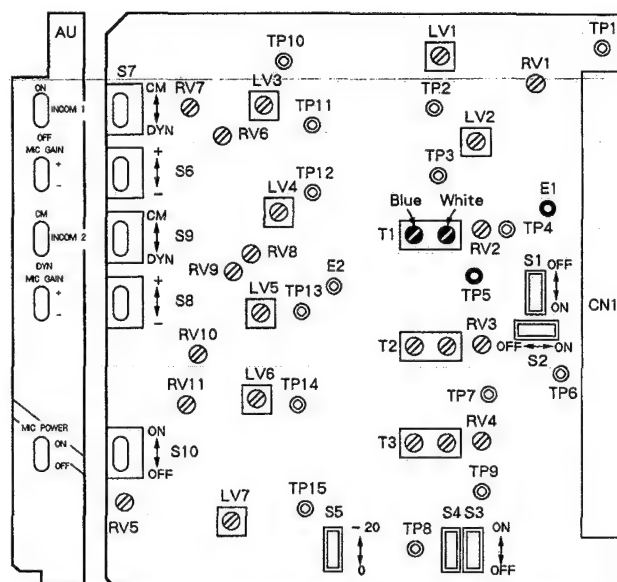
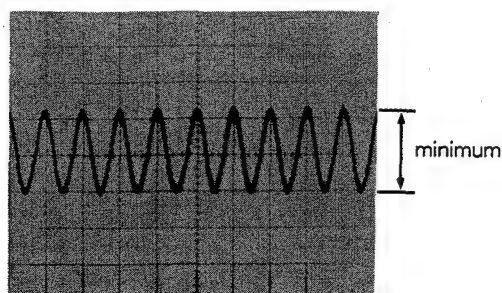
Adjusting point: T1/AU-129P board

Adjustment Procedures

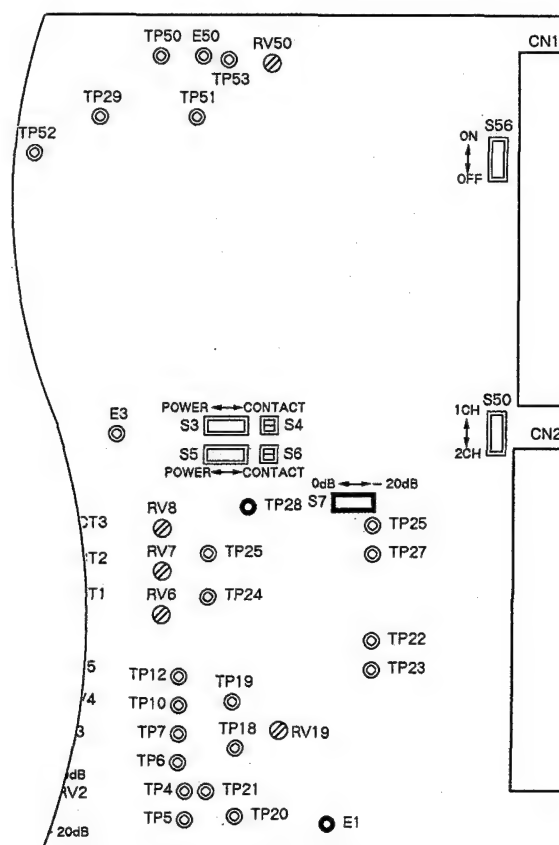
- Input the 1 kHz sine-wave signal to CN2-TPB25 (X), TPA25 (Y) and TPB24 (GND) on the extension board/AT-55B board. ...Fig. 2 (Refer to 5-1-2. audio connection)
- Adjust the level control of audio generator so that the audio level at TP28 (GND;E1)/AT-55B board is 200 mVp-p.
- Connect a probe of oscilloscope to TP5/AU-129P board.
- Adjust a white core of T1/AU-129P board slowly, and the sine-wave appears near 5.0 Vdc, and then readjust it so that A and B on the 5.0 Vdc are nearly equal.



- Set the input AC/DC mode on the oscilloscope to "AC" mode, and adjust a blue core of T1/AU-129P board so that the sine-wave is minimum.



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AT-55A/AT-55B BOARD (COMPONENT SIDE)

8-15. PGM LEVEL ADJUSTMENT

Equipment: Oscilloscope, Audio generator

To be extended: AU-129P board

Preparation

- Extended AT-55B board/CCU-370P with extension board.

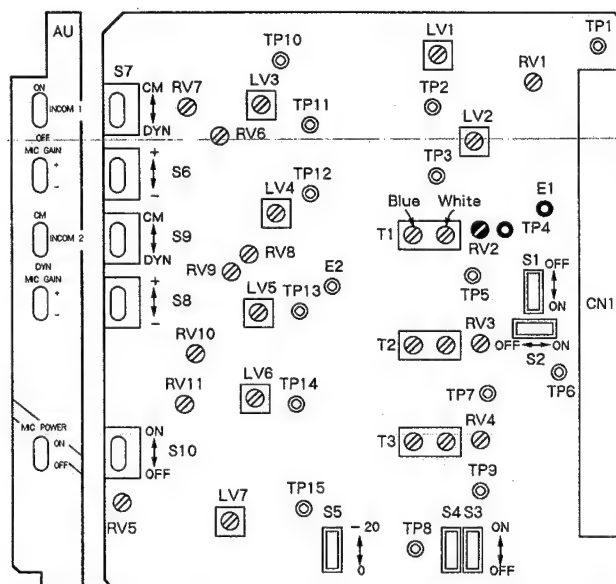
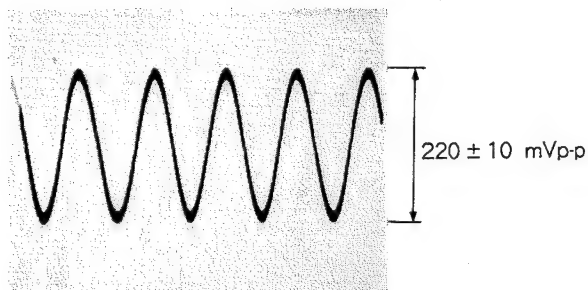
- S7 (0 dB/ - 20dB) switch/AT-55B board → "0 dB"

Test point: TP4 (GND;E1)/AU-129P board

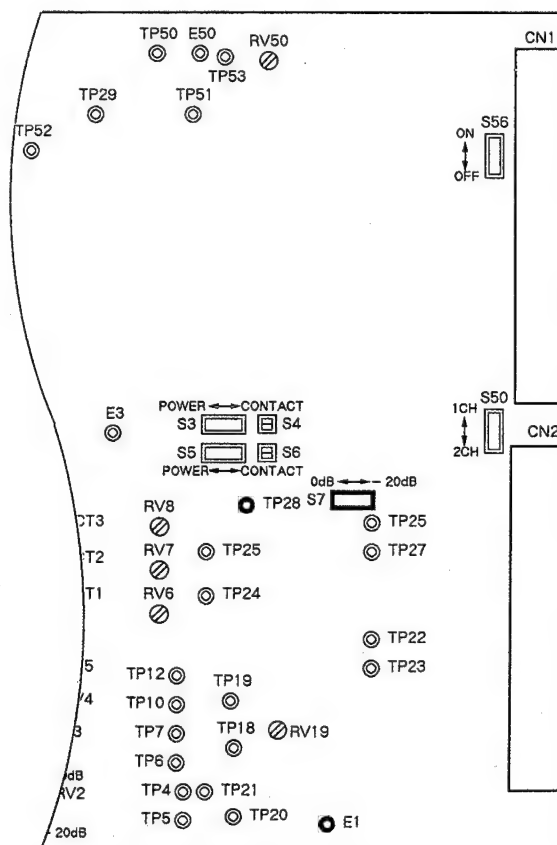
Adjusting point: RV2 (PGM LEV)/AU-129P board

Adjustment Procedures

- Input the 1 kHz sine-wave signal to CN2-TPB25 (X), TPA25 (Y) and TPB24 (GND) on the extension board/AT-55B board. ...Fig. 2 (Refer to 5-1-2. audio connection)
- Adjust the level control of audio generator so that the audio level at TP28 (GND;E1)/AT-55B board is 200 mVp-p.
- Adjust RV2/AU-129P board so that a level on the TP4/AU-129P board is 220 mVp-p.



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AT-55A/AT-55B BOARD (COMPONENT SIDE)

5-3. BOARD SWITCH SETTINGS AFTER FINISHING ADJUSTMENT

1. Switch setting

Check the board switch settings after the adjustment is completed. Switches whose setting position put in parenthesis can be set according to use. They are set to the position in parenthesis at the factory.

- ① VA-86 board
S1 (FLARE) → "ON"
- ② IE-26P board
S1 (SKIN SET) → OFF
S2 (DTL ON/OFF) → (ON)
- ③ PR-130 board
S1 (GAMMA ON/OFF) → ON
- ④ MS-33 board
S7 (MONITOR SELECT) → (VF)
- ⑤ SG-167P board
S1 (R ON/OFF) → ON
S2 (G ON/OFF) → ON
- ⑥ AT-54 board
S1 (MODE) → F

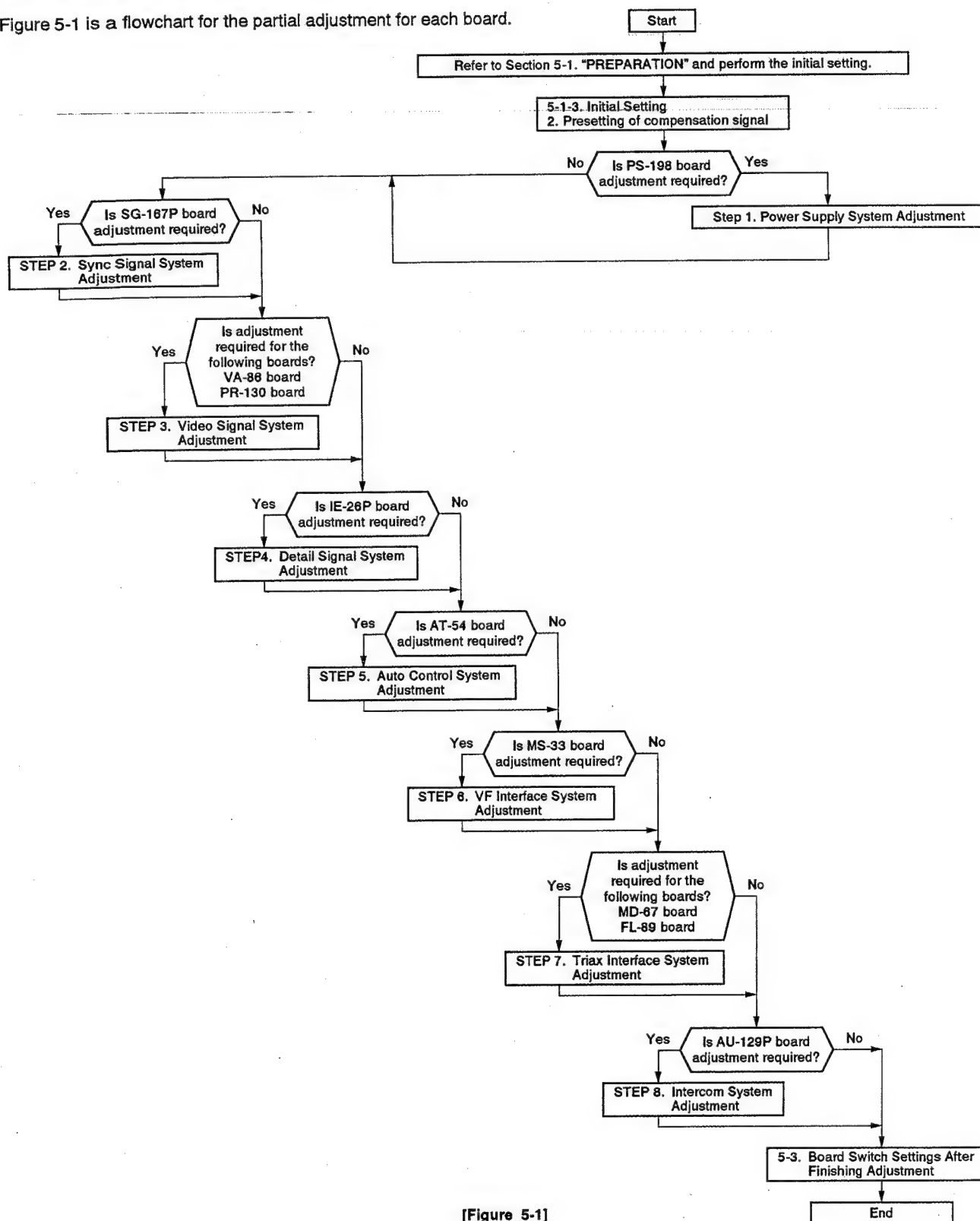
2. Control setting

- ① IE-26P board
● RV31 (V DTL)
→ Adjust to your desired V detail level.
- ② PR-130 board
● RV26 (DTL MIX) → Mechanical center
- ③ AU-129P board
● RV5 (TRACKER LEVEL)
This controls audio level.
This is set fully clockwise at the factory, adjust to your desired audio level.
- ④ MS-33 board
● RV18 (ZOOM IND) Serial No. 40301 and higher
This controls brightness of Zoom Indicator.
This is set to mechanical center at the factory, adjust to your preferred brightness.

5-4. PARTIAL ADJUSTMENT

5-4-1. Partial Adjustment Flowchart for Each Board

Figure 5-1 is a flowchart for the partial adjustment for each board.



[Figure 5-1]

5-4-2. MAIN PARTIAL ADJUSTMENT ITEMS

In this section, the main items most of ten requiring adjustment are identified.

When performing these adjustments, follow each flow chart completely from start to end.

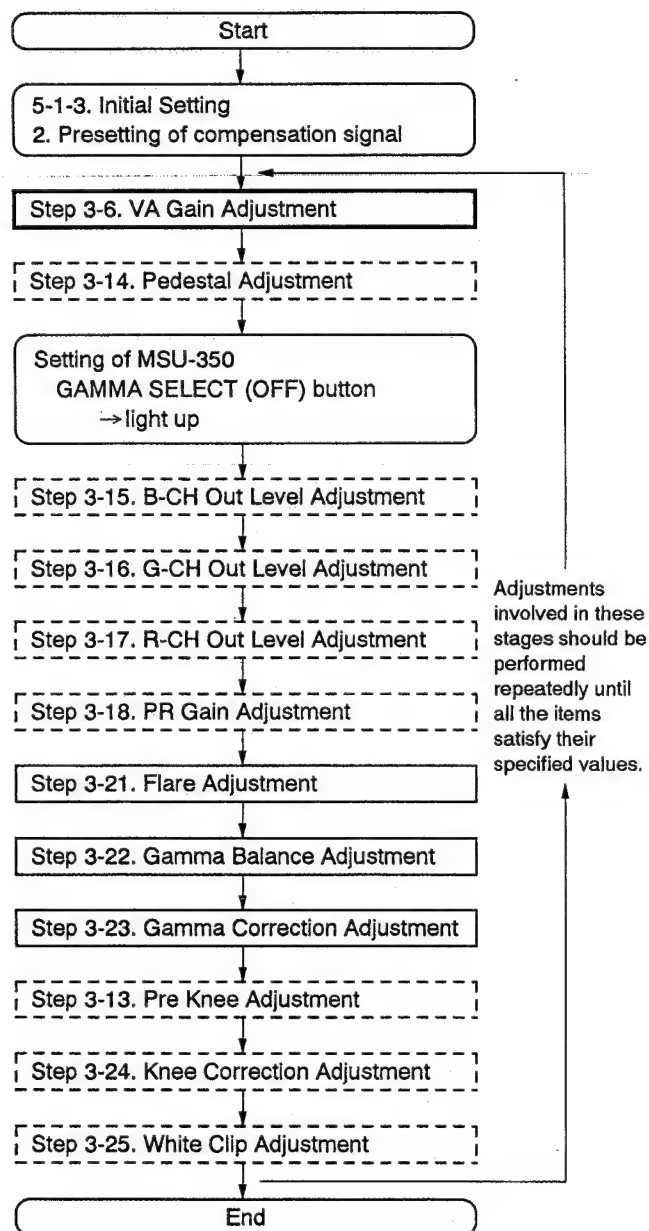
Note that it is not always necessary to adjust some items, and these are identified as follows:

= Main items

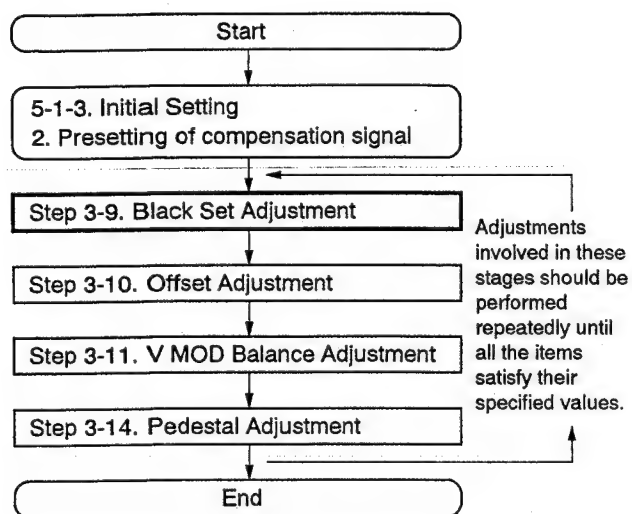
= These adjustments must be performed with each main item.

= These items are to be checked, but only require adjustment if they do not meet their specifications.

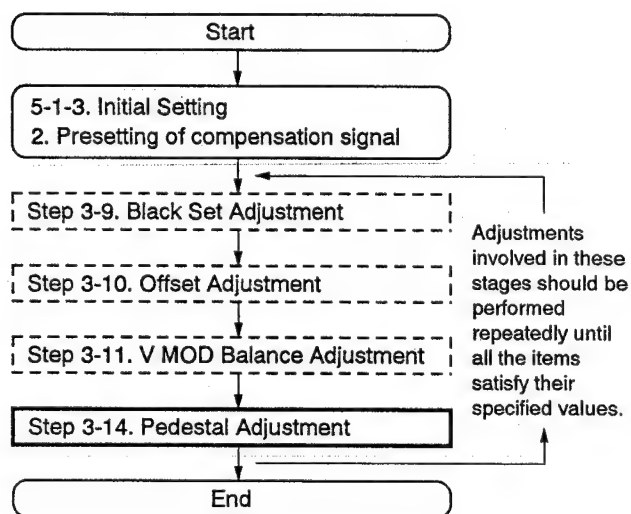
[White Balance Adjustment]



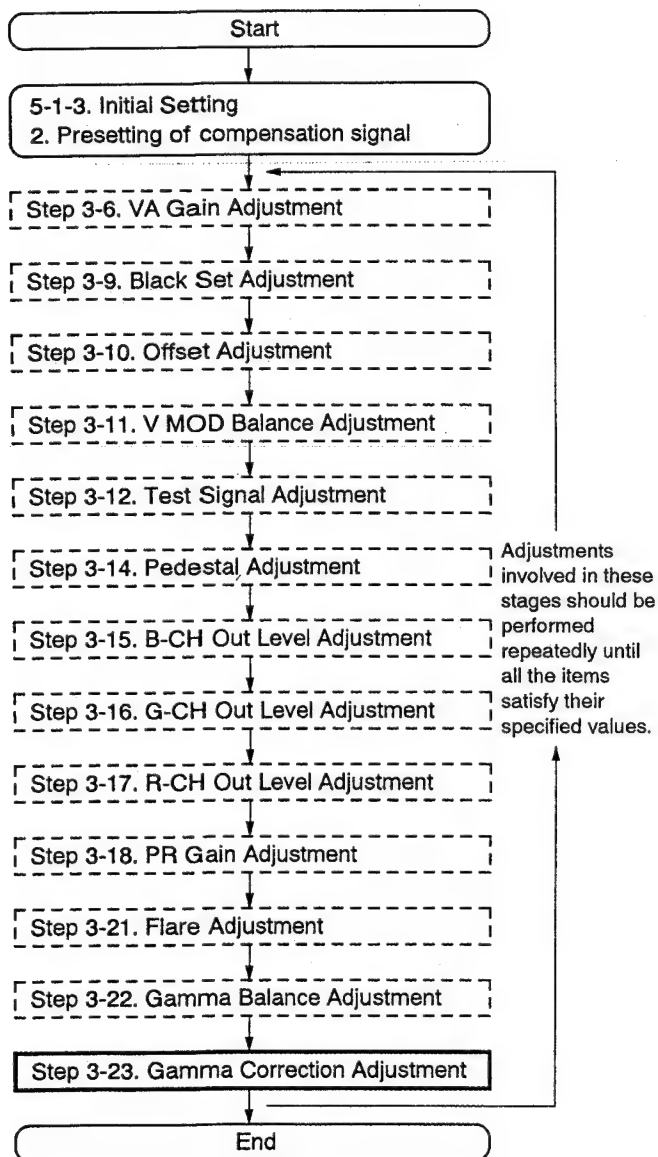
[Black Set Adjustment]



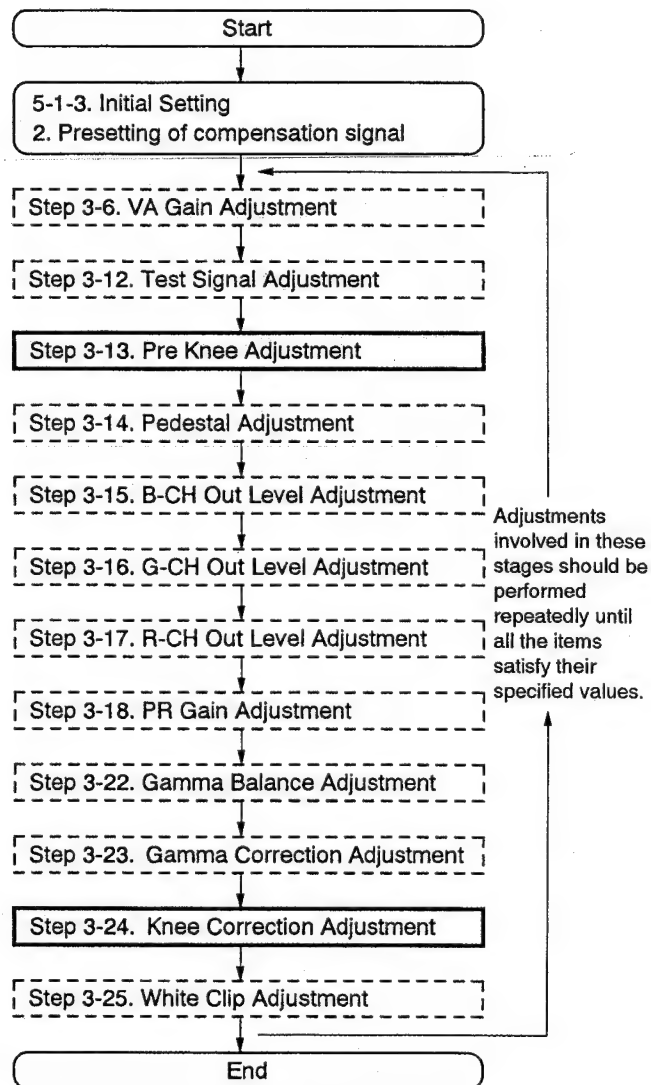
[Pedestal Adjustment]



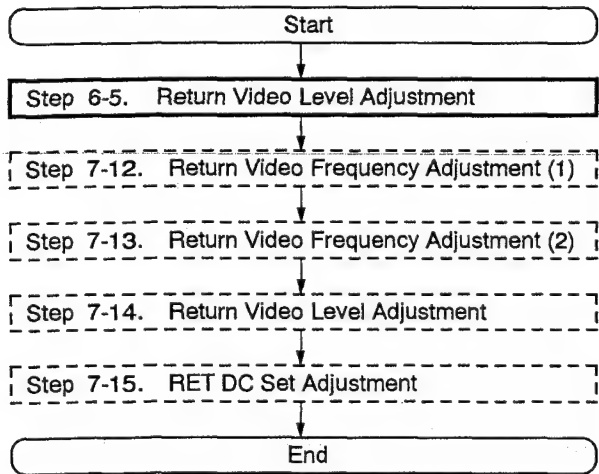
[Gamma Correction Adjustment]



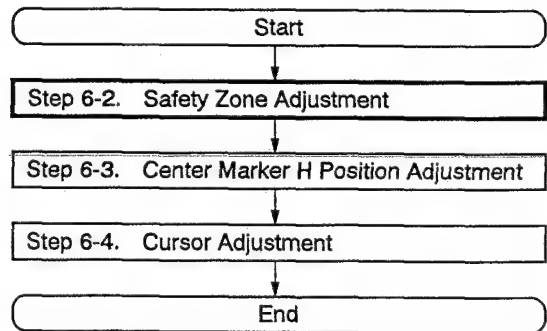
[Knee Correction Adjustment]



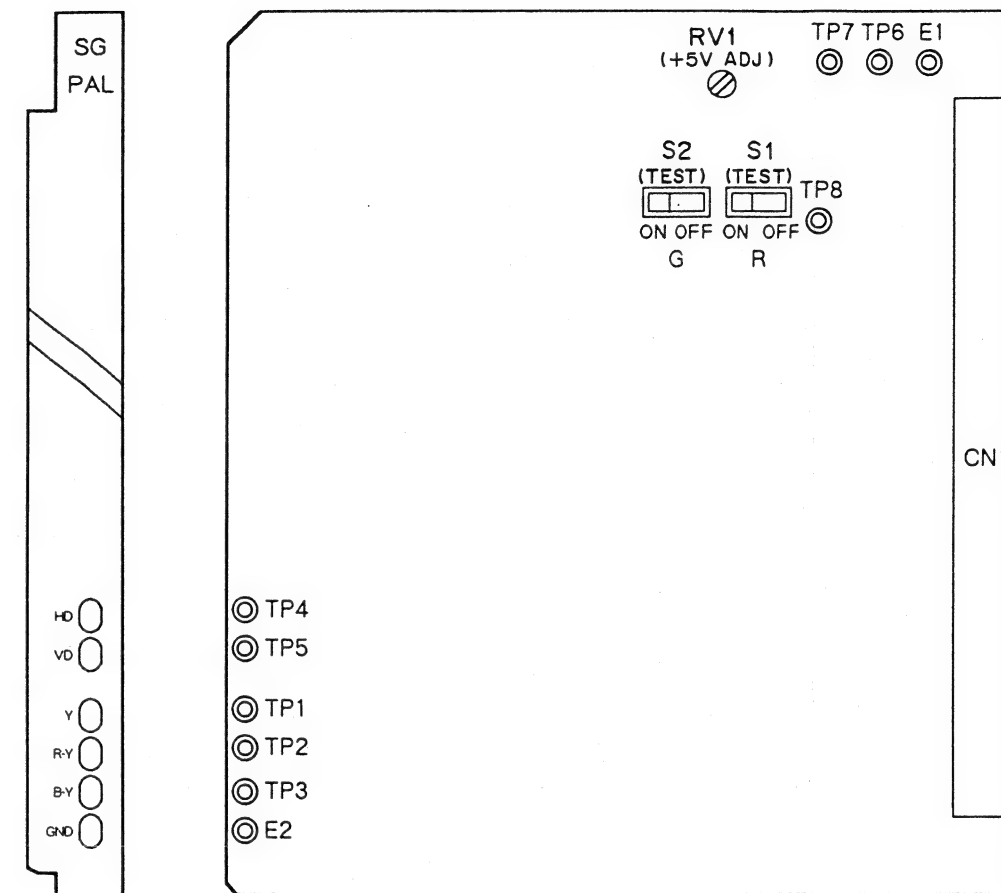
[Return Video Adjustment]



[Cursor Position Adjustment]



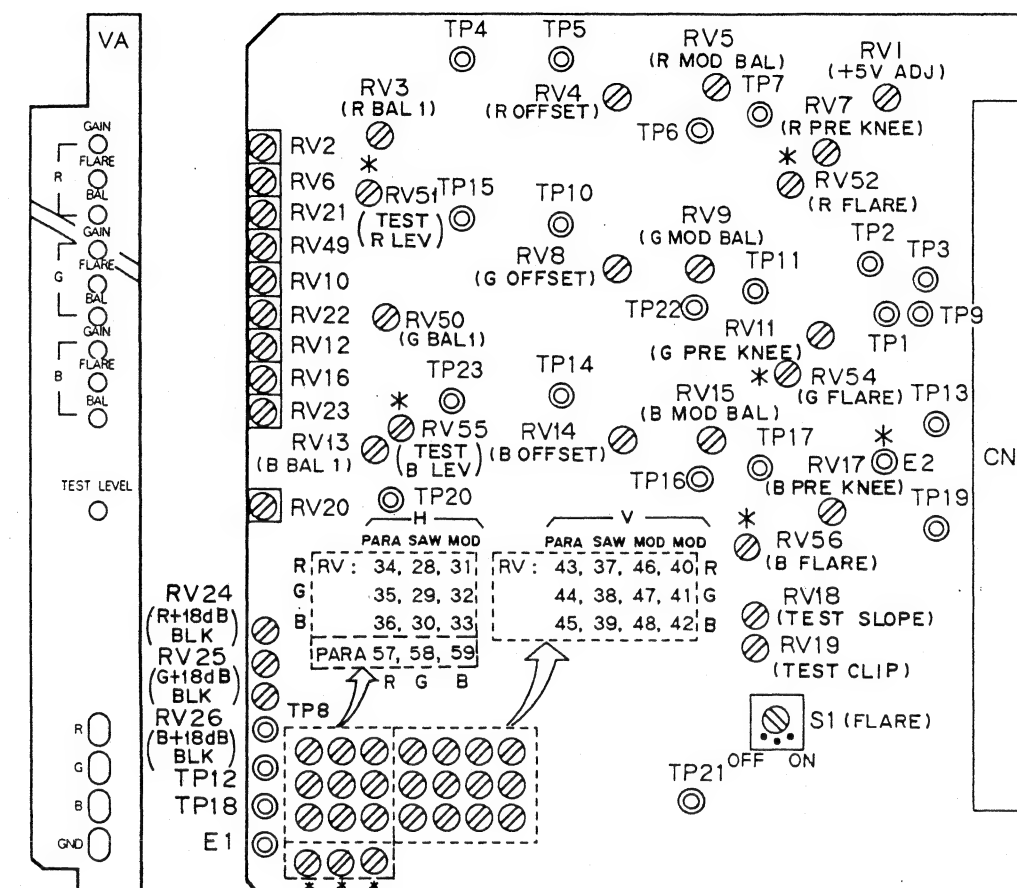
SG-167 BOARD



(PANEL SIDE) SG-167P BOARD (COMPONENT SIDE)

VA-86 BOARD

Serial No. 40001 to 42700



(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

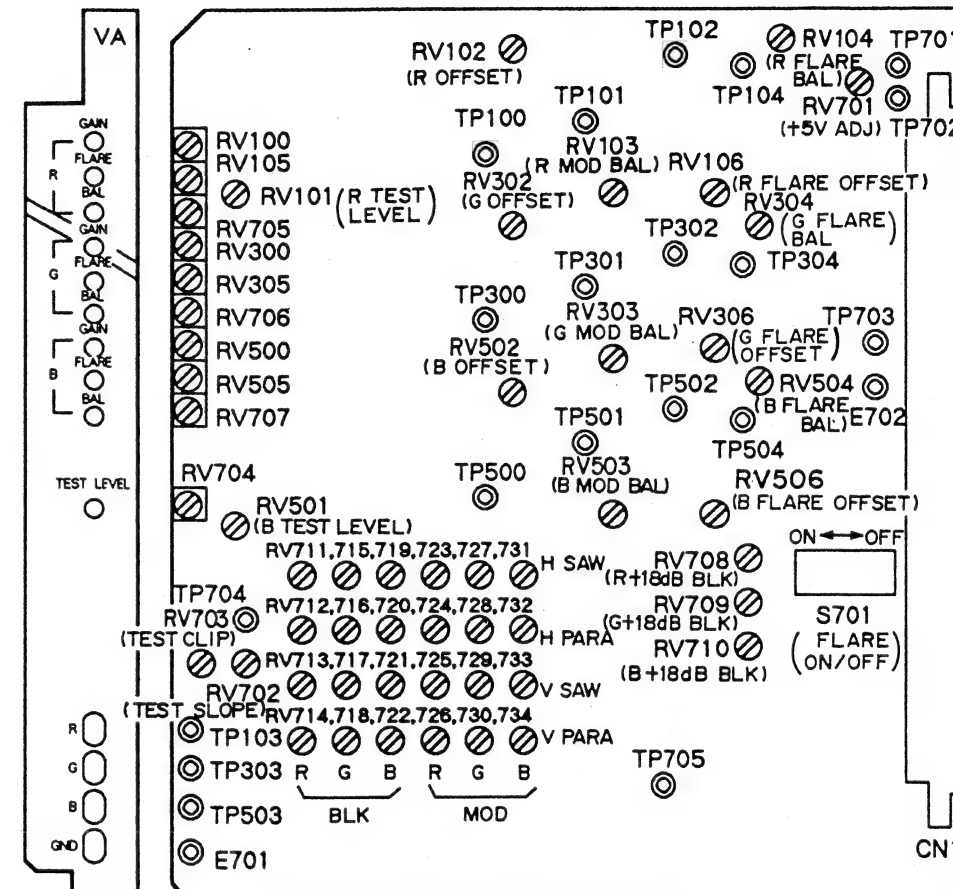
RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12.

Suffix -11; Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700

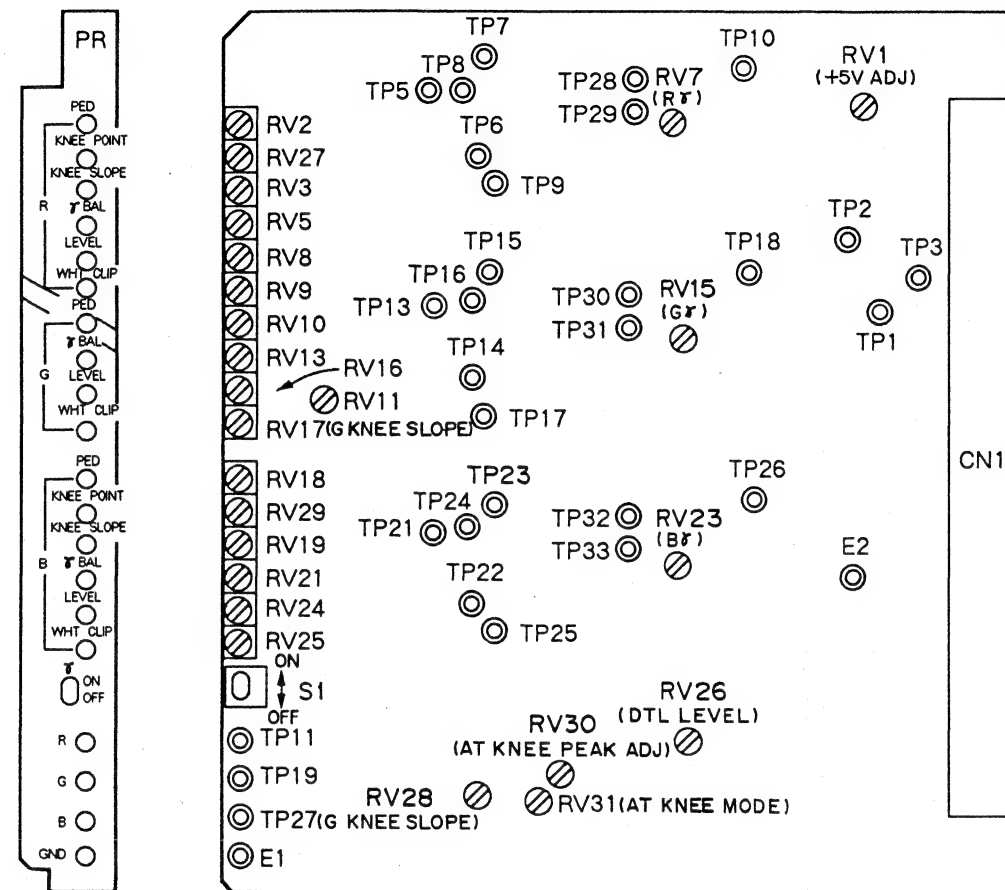
VA-131A BOARD

Serial No. 42701 and higher



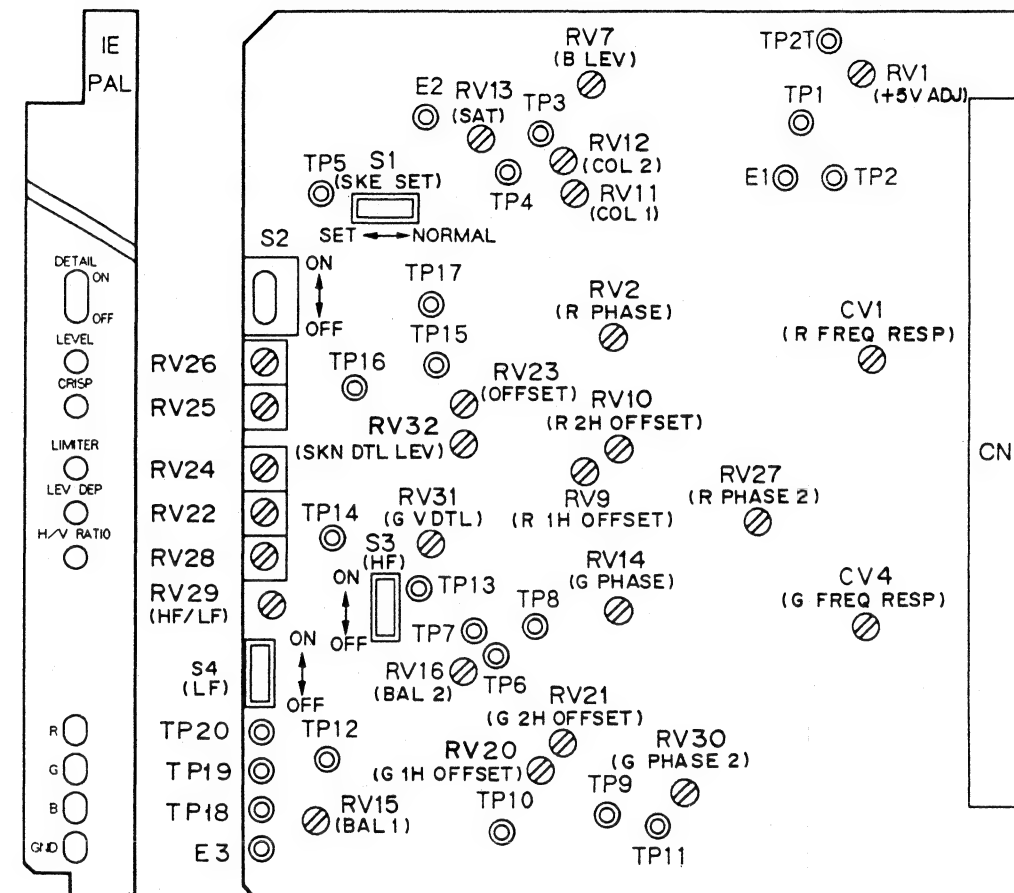
(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

PR-130 BOARD



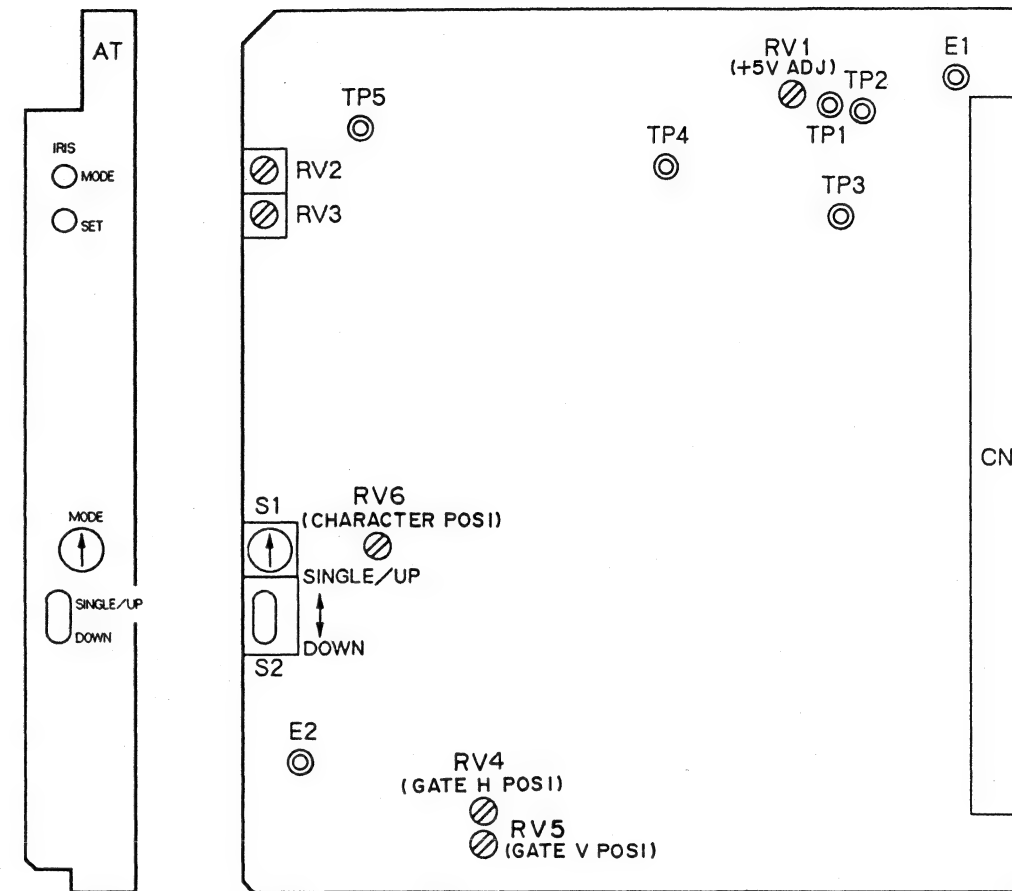
(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

IE-26P BOARD



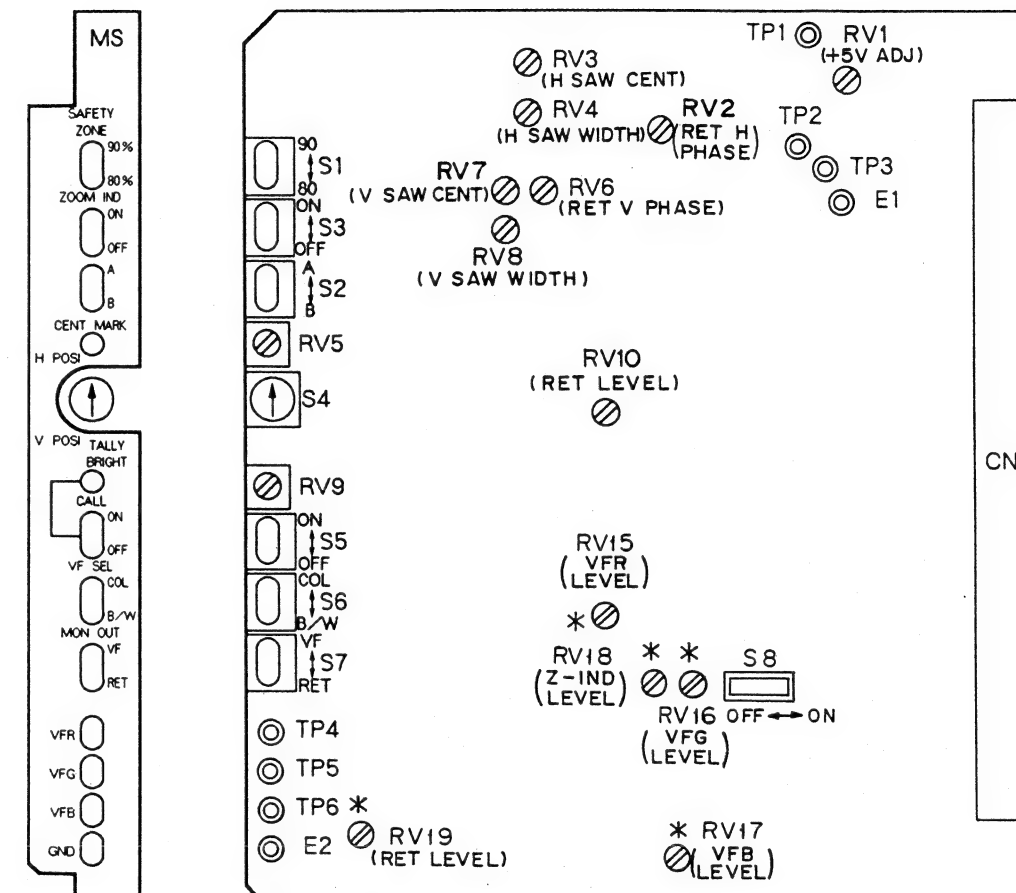
(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

AT-54 BOARD



(PANEL SIDE) AT-54 BOARD (COMPONENT SIDE)

MS-33 BOARD



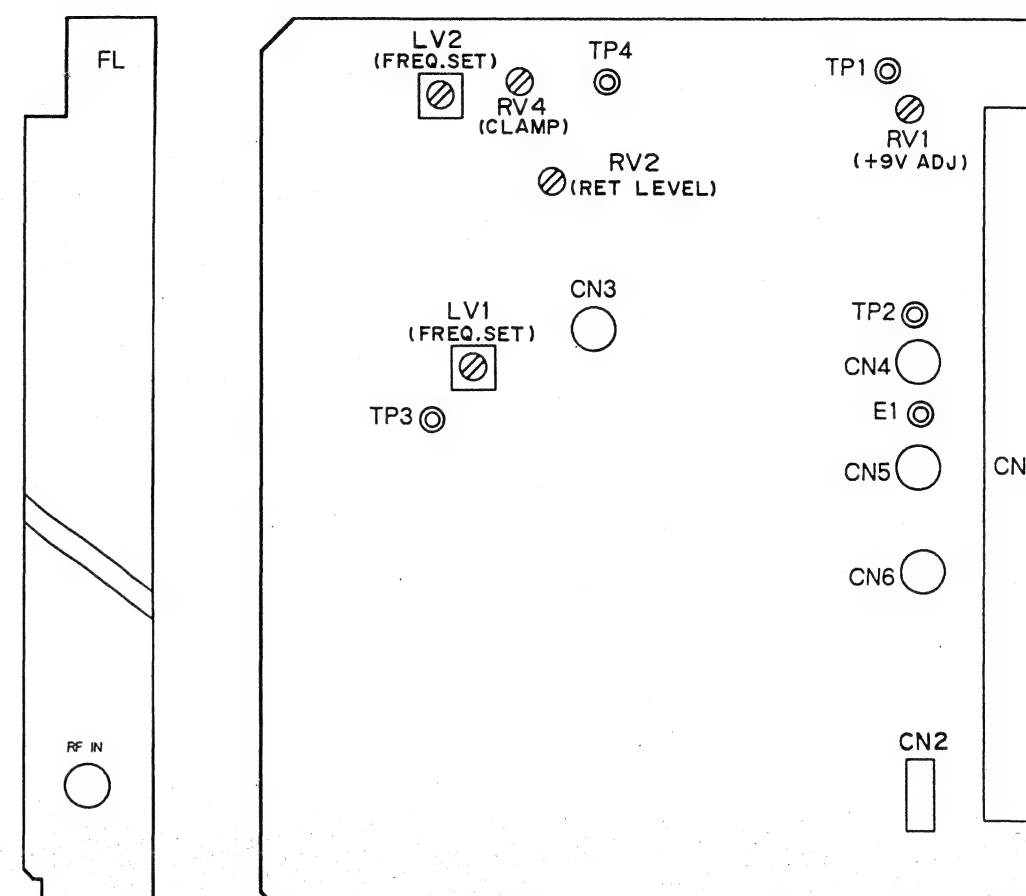
(PANEL SIDE) MS-33 BOARD (COMPONENT SIDE)

RVs identified by marking " * " are mounted on the MS-33 board with a suffix of -12.

Suffix -11; Serial No. Up to 40210

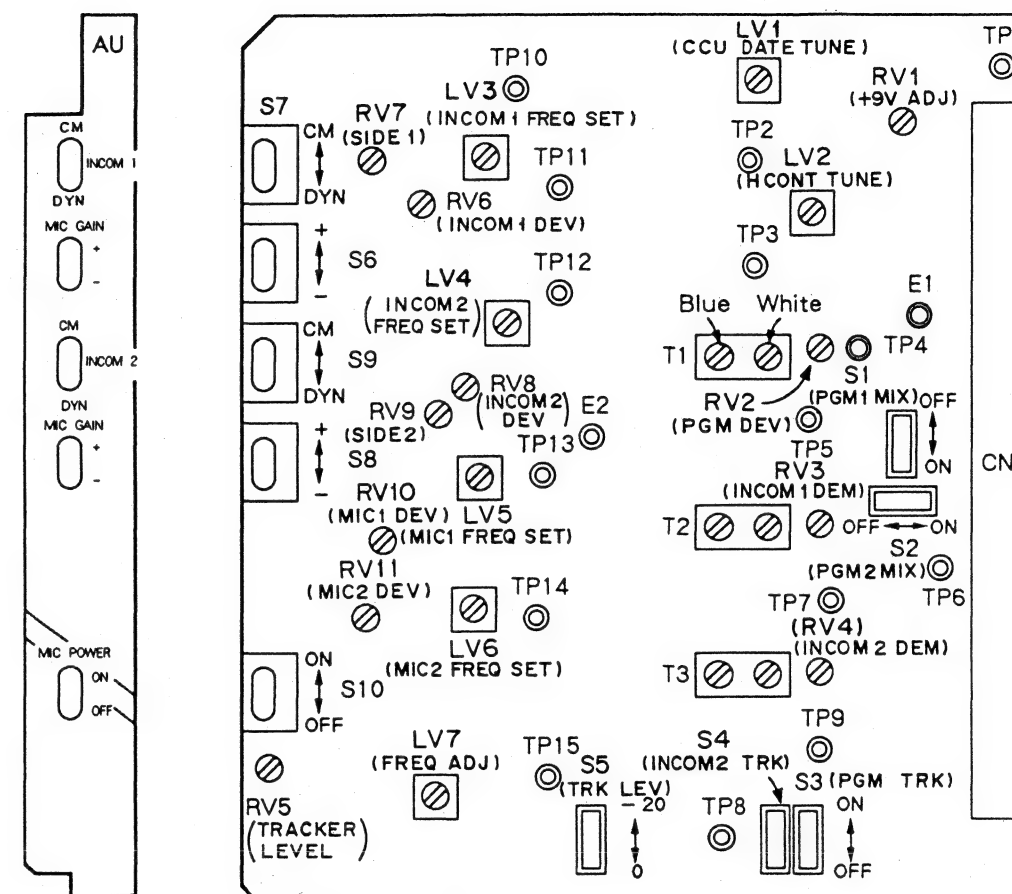
Suffix -12; Serial No. 40301 and higher

FL-89 BOARD



(PANEL SIDE) FL-89 BOARD (COMPONENT SIDE)

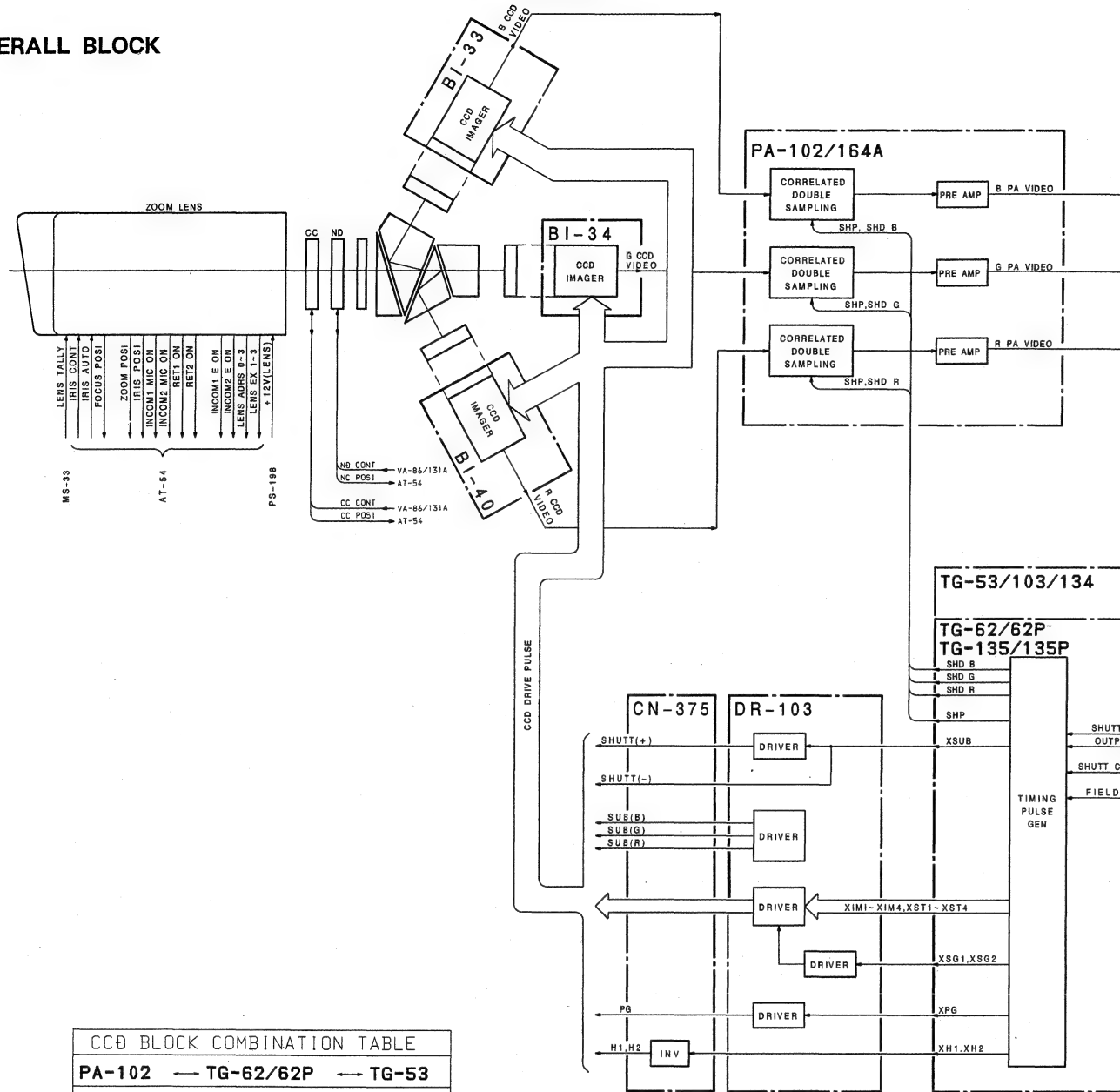
AU-129P BOARD



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)

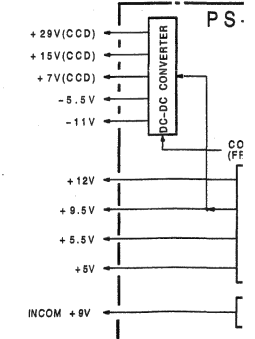
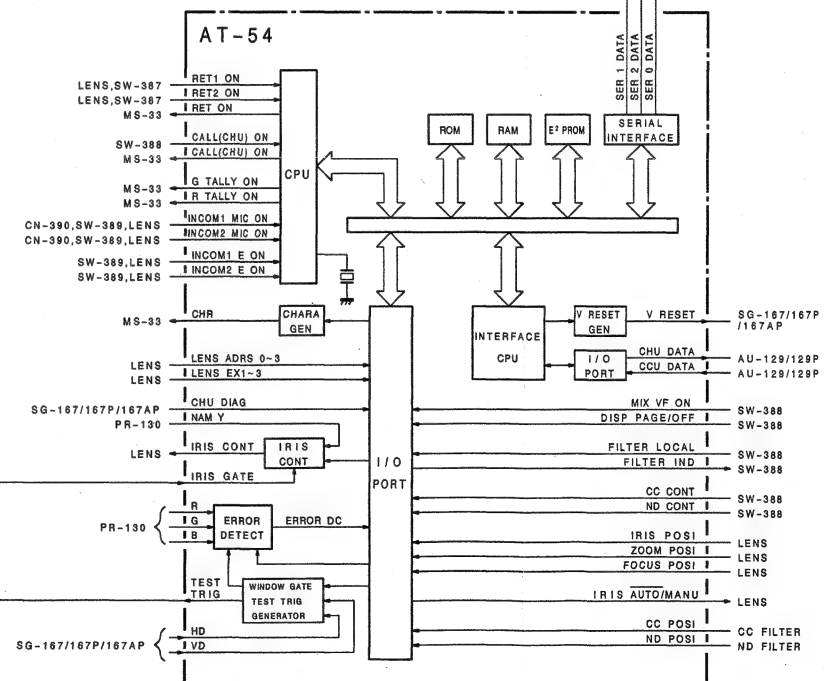
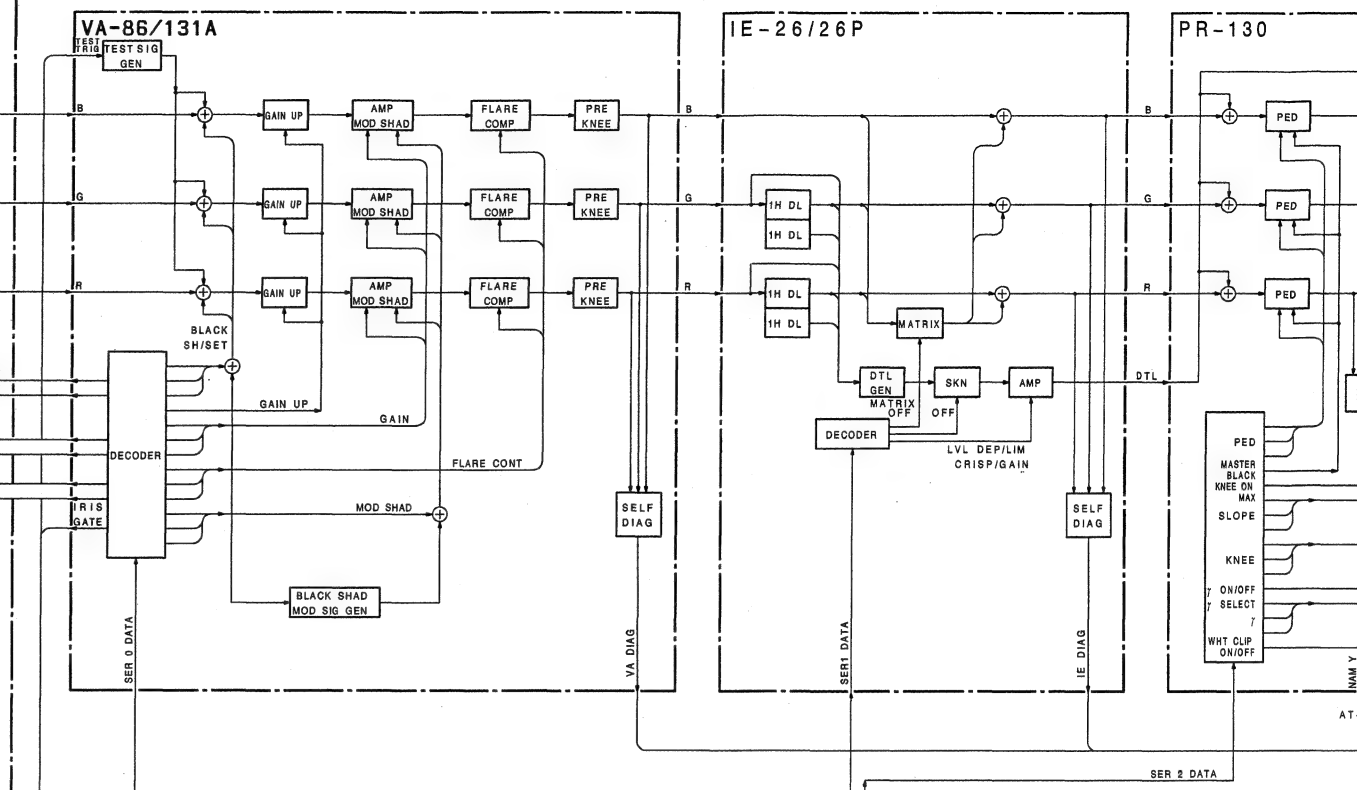
SECTION A BLOCK DIAGRAMS

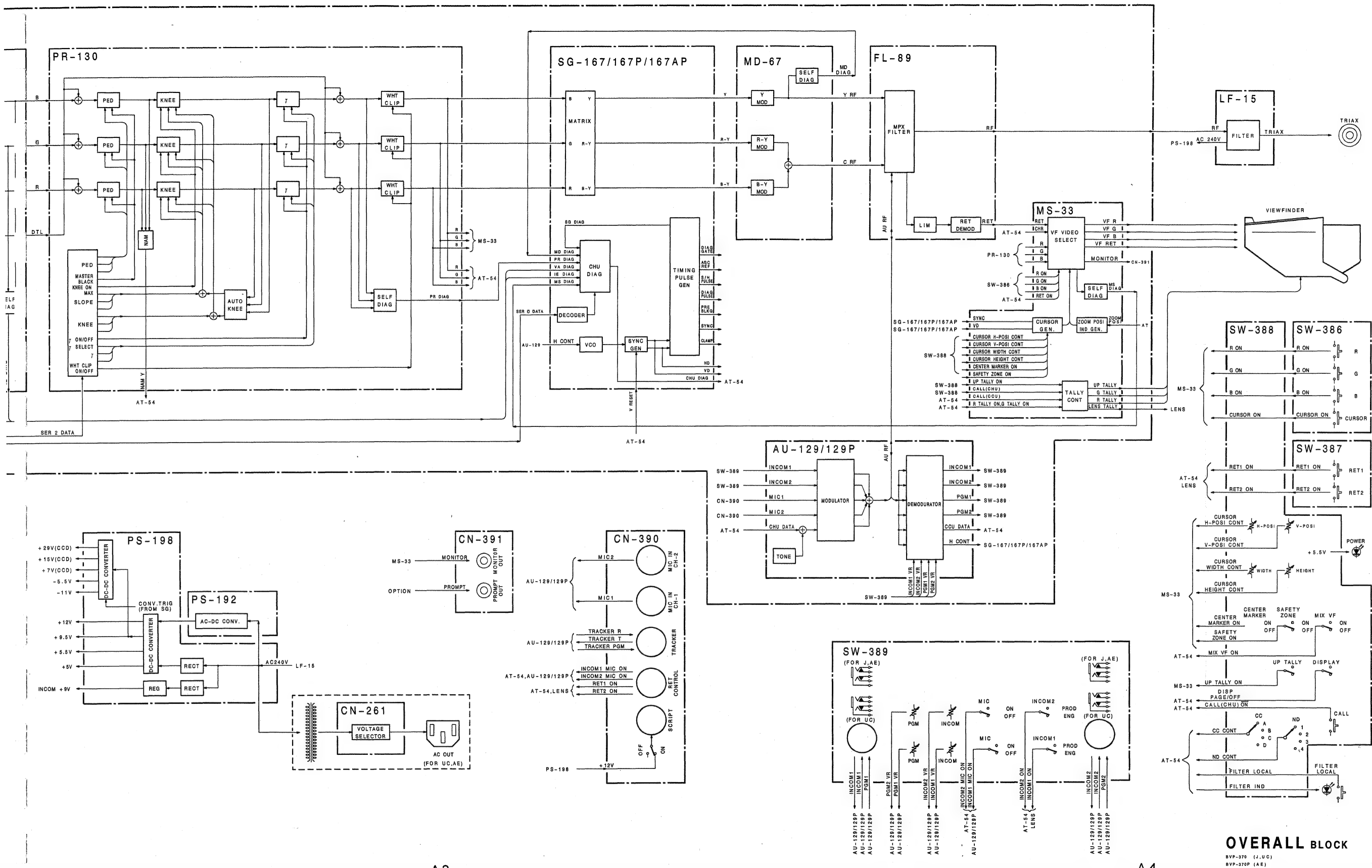
OVERALL BLOCK



CCD BLOCK COMBINATION TABLE		
PA-102	→ TG-62/62P	→ TG-53
PA-102	→ TG-62/62P	→ TG-103
PA-164A	→ TG-135/135P	→ TG-134

MB-270



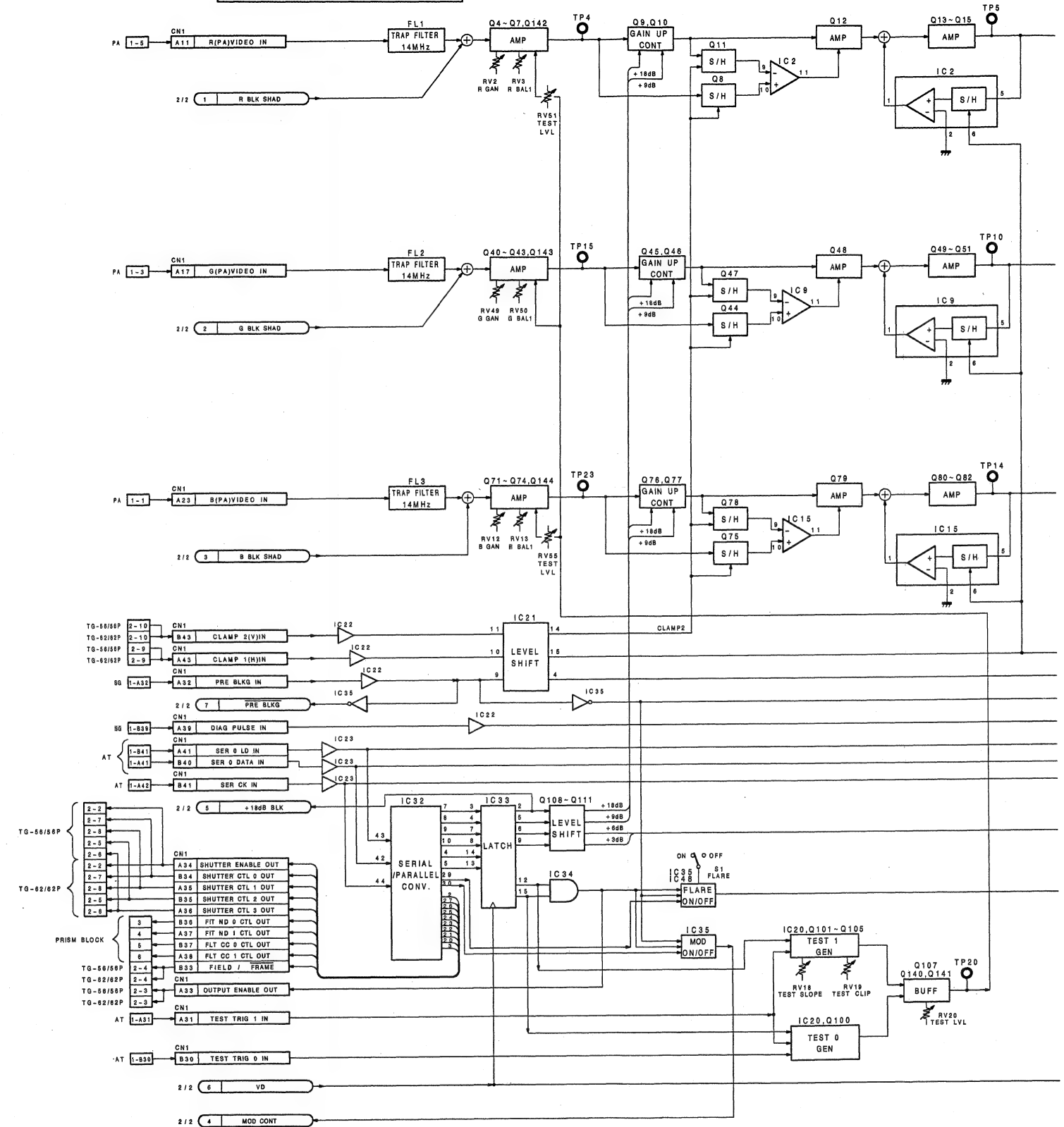


OVERALL BLOCK

BVP-370 (J,U,C)
BVP-370P (A,E)

VA-86 BLOCK (1/2)

Serial No. 10001 - 12010 (UC)
30001 - 31300 (J)
40001 - 42700 (AE)

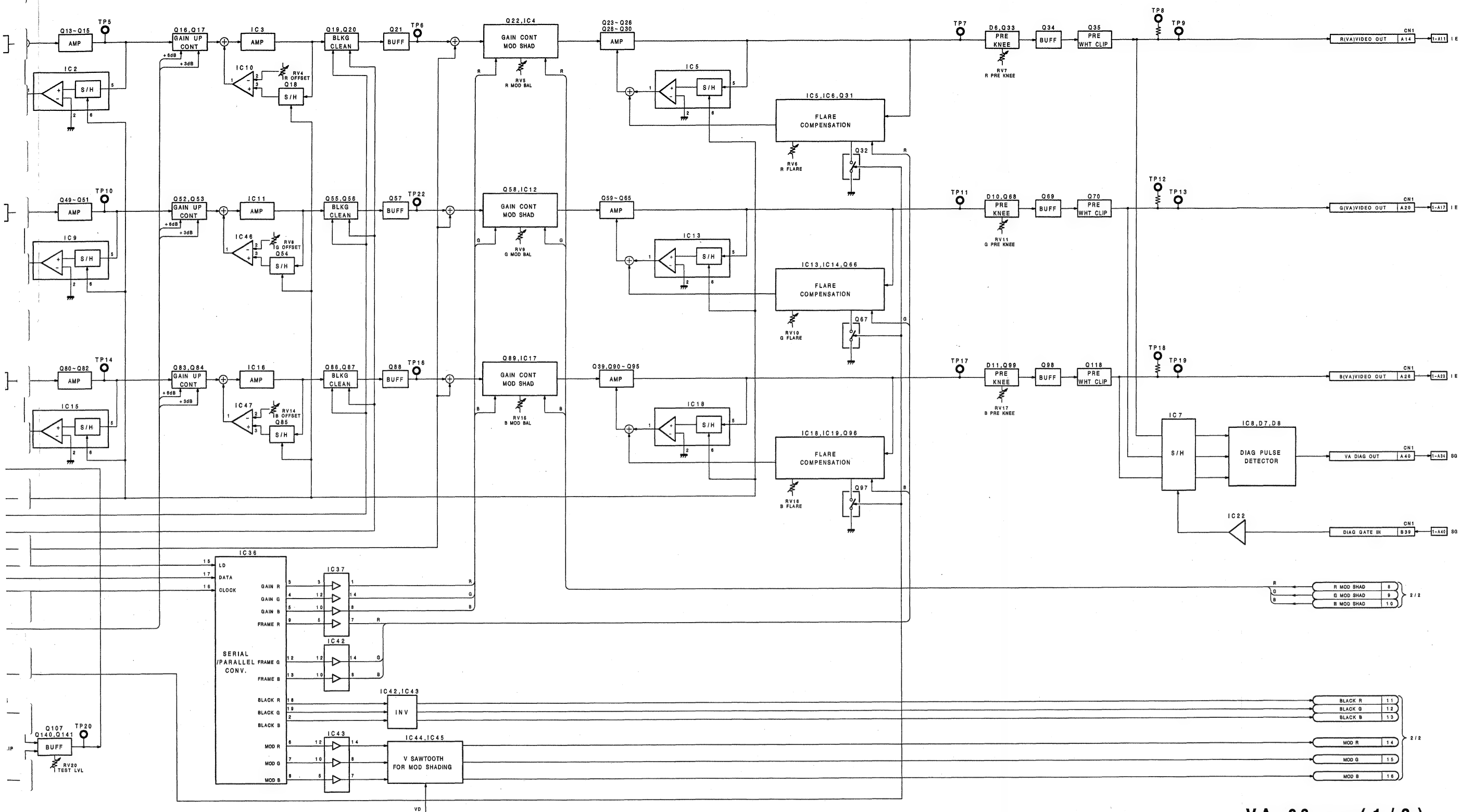


A-5 (a)

A-6 (a)

VA-86 (1/2)

VA-86 (1/2)



VA-86 BLOCK(1/2)

BVP-370 (J,UC)
BVP-370P(AE)
BVP-270 (J,UC)
BVP-270P(AE)

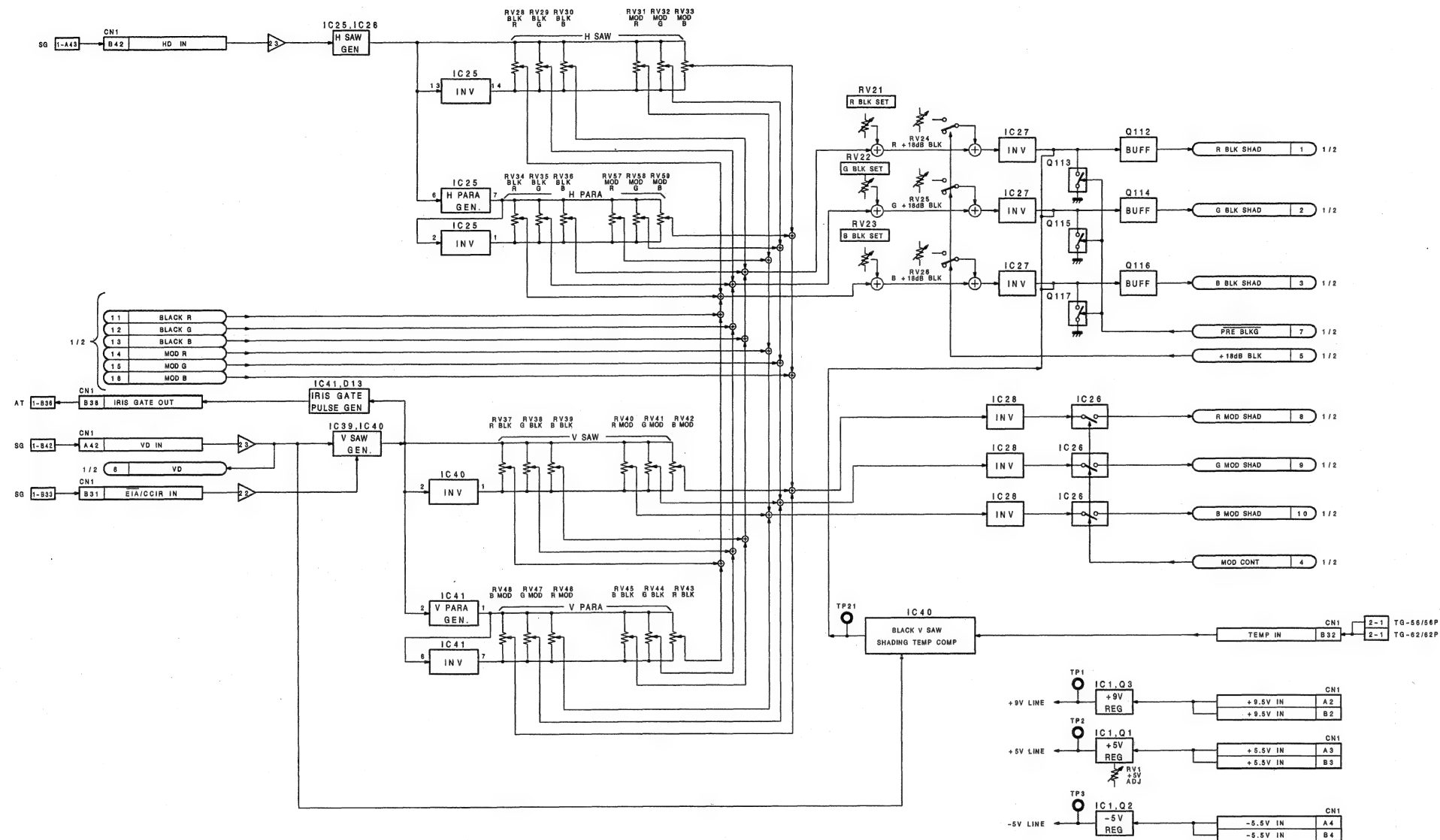
A-7 (a)

A-8 (a)

BVP-370/P
BVP-270/P

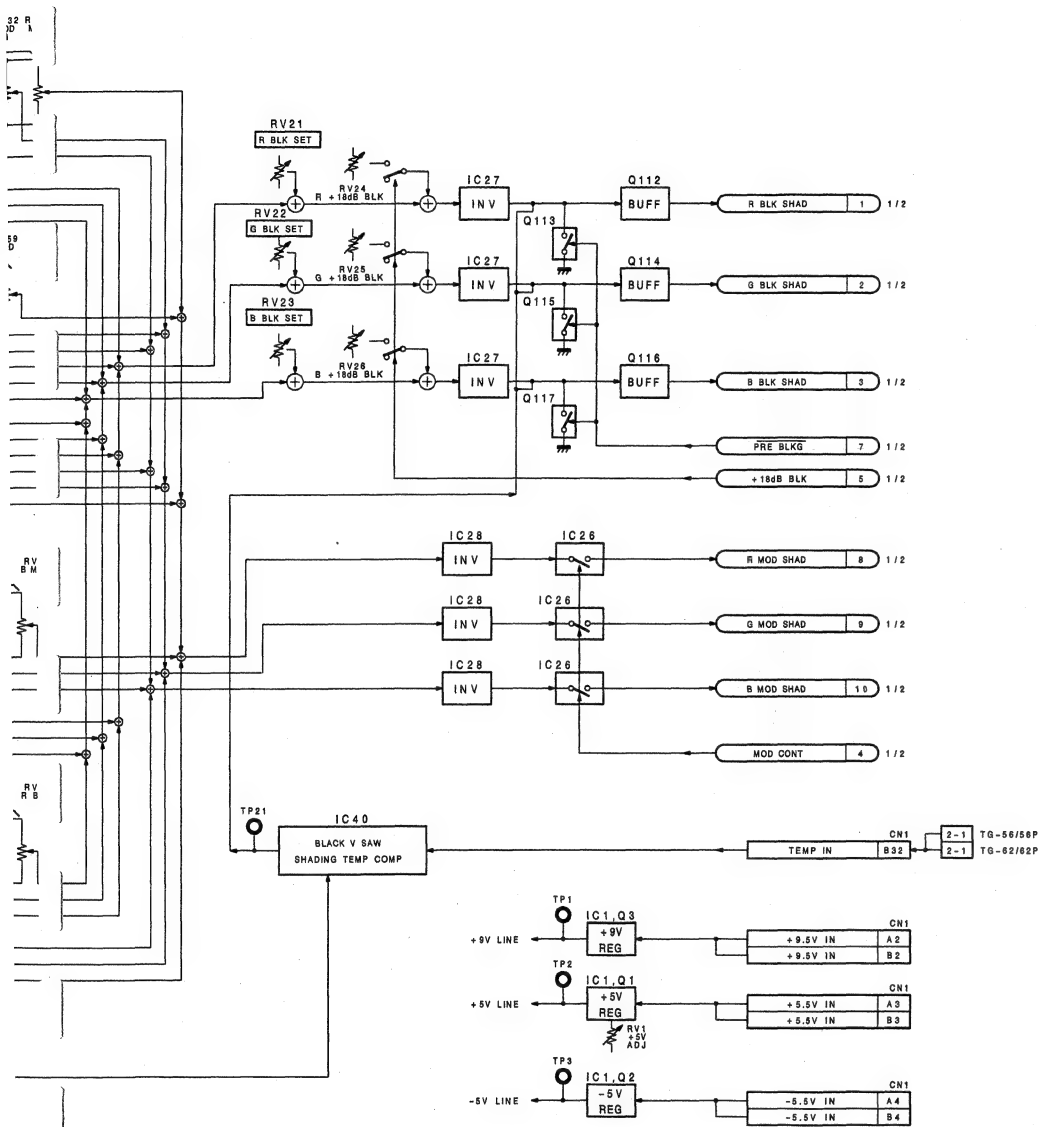
VA-86 BLOCK (2/2)

Serial No. 10001 - 12010 (UC)
 30001 - 31300 (J)
 40001 - 42700 (AE)



VA-86 BLOCK (2 / 2)

BVP-370 (J,UC)
 BVP-370P (AE)
 BVP-270 (J,UC)
 BVP-270P (AE)



VA-86 BLOCK (2 / 2)

BVP-270 (J,UC)
BVP-270P(AE)
BVP-270 (J,UC)
BVP-270P(AE)

A-10

E

F

G

H

I

J

K

L

1

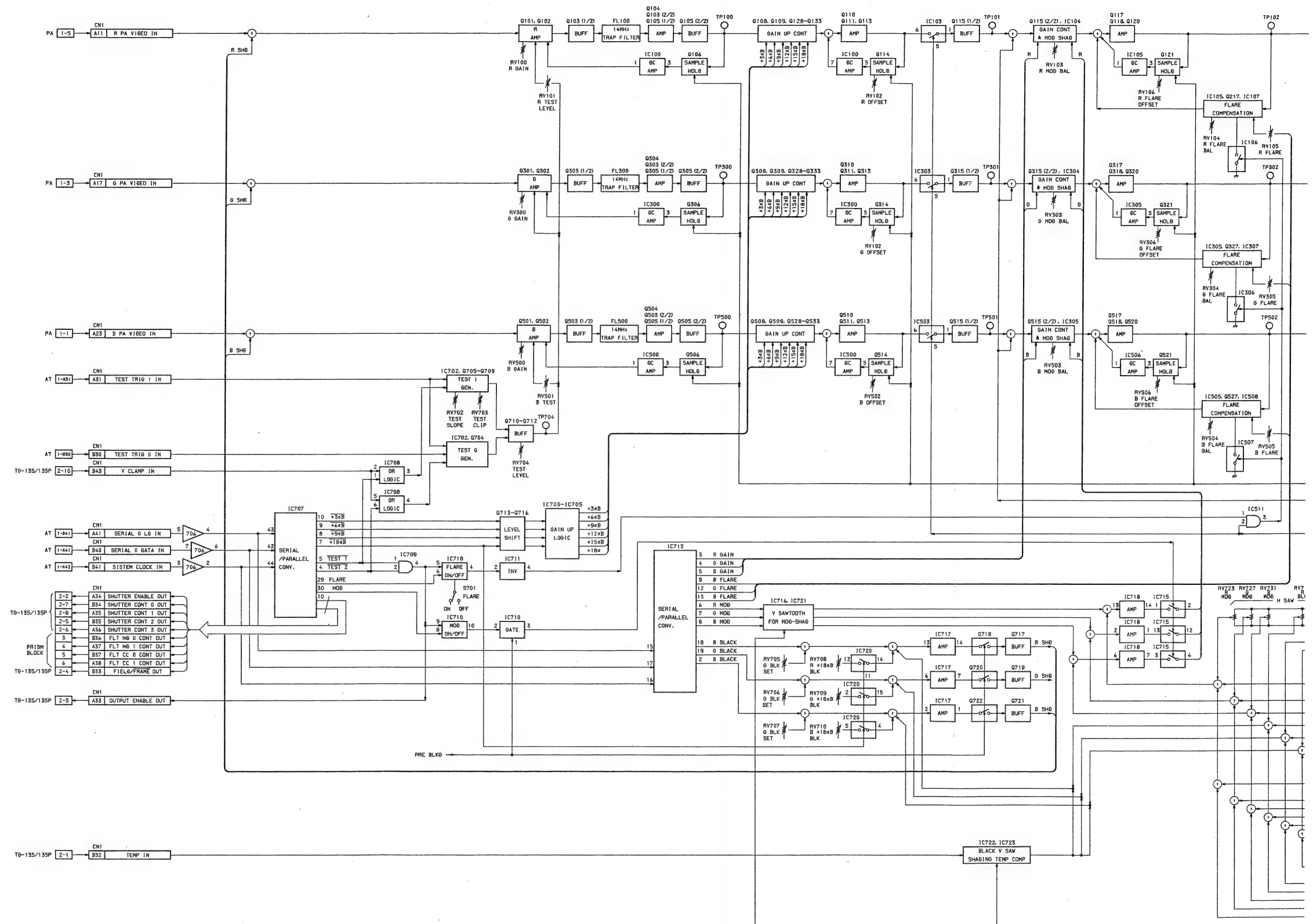
2

3

4

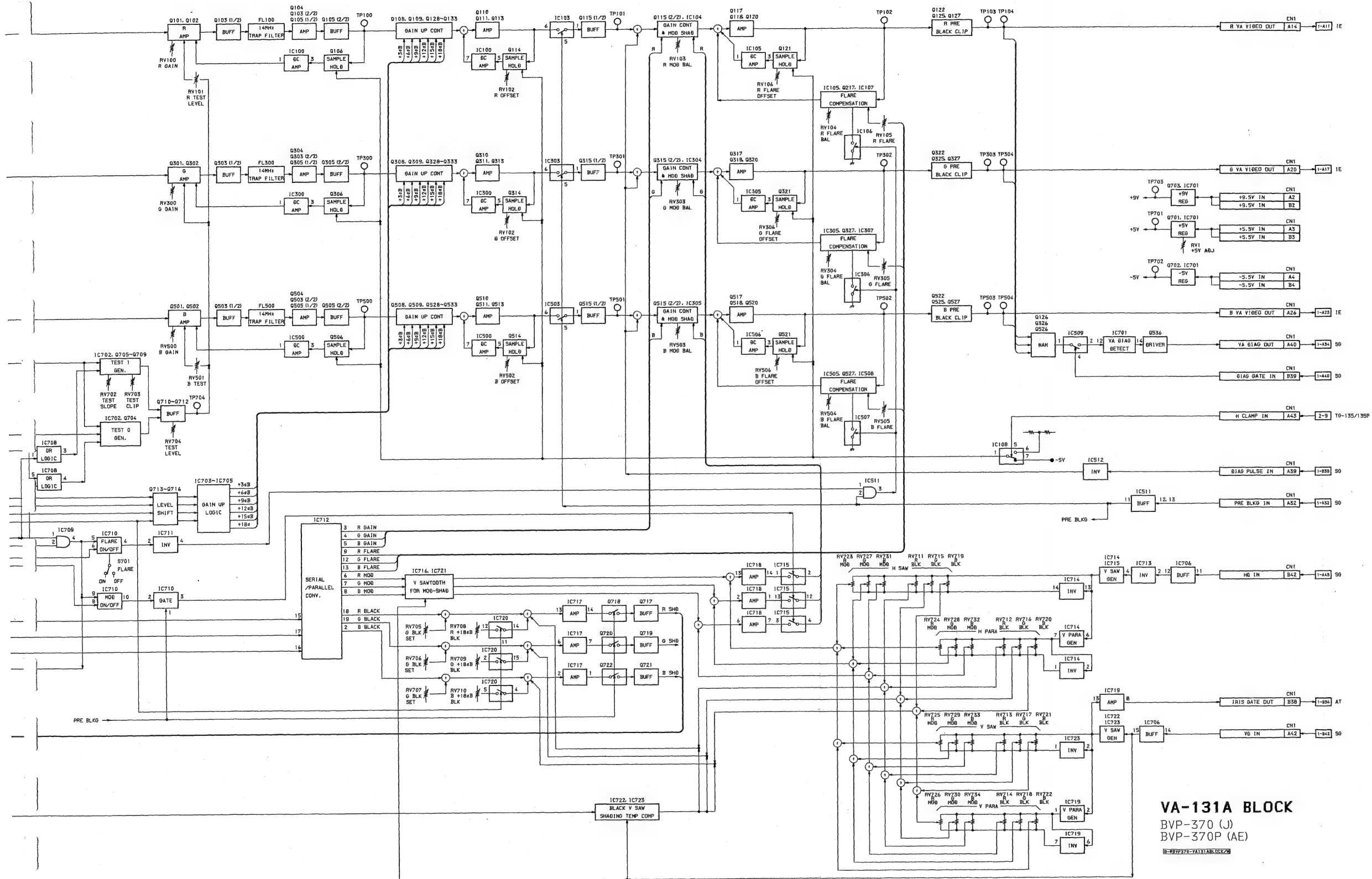
5

Serial No. 31301 -	(J)
42701 -	(AE)



A-7 (b)

H



VA-131A BLOCK
BVP-370 (J)
BVP-370P (AE)
BVP-370P (AE)

A-7 (b)

A-8 (b)

BVP-370/P

E

F

G

H

I

J

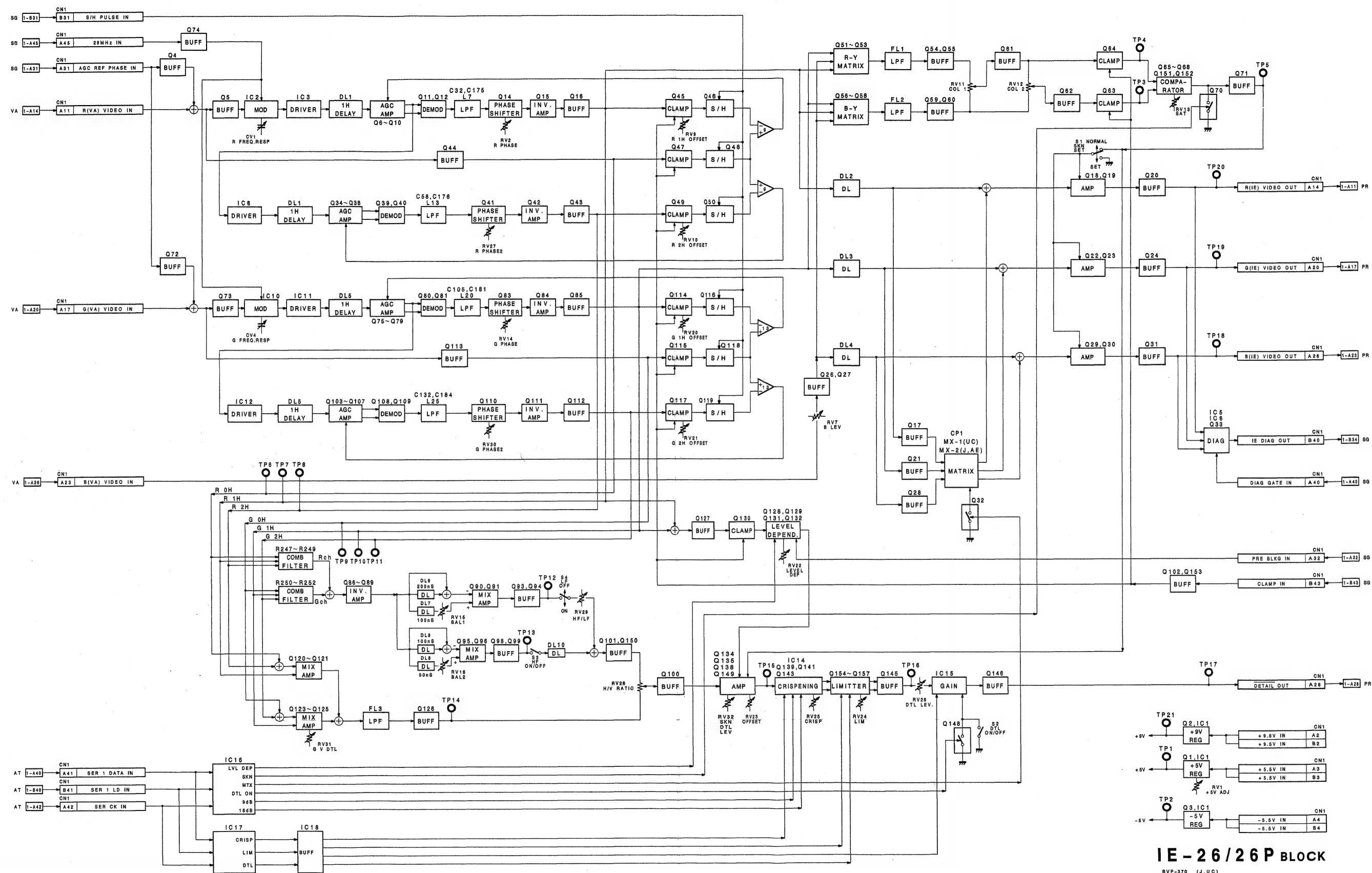
K

L

IE-26/26P

IE-26/26P

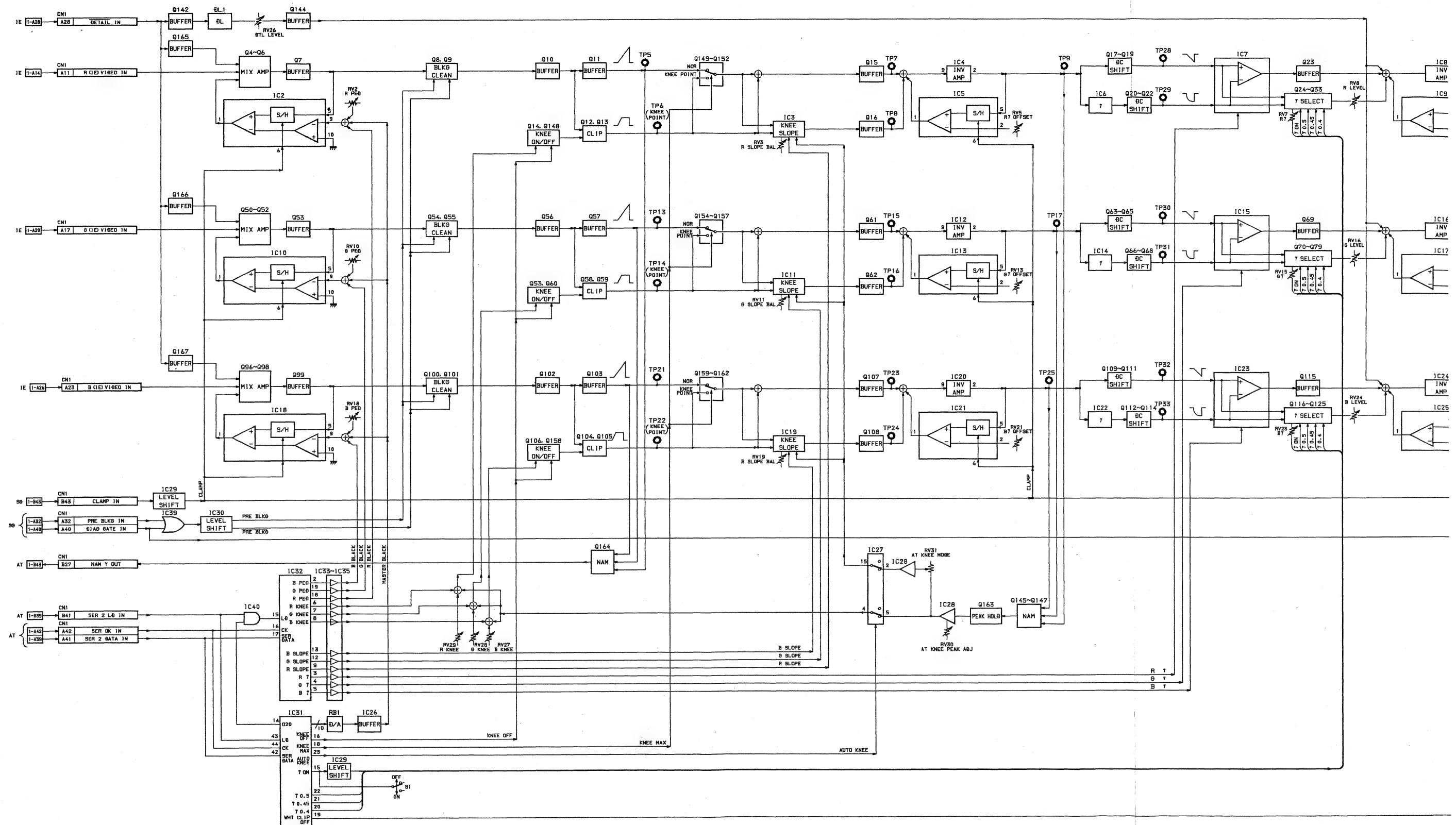
IE-26/26P BLOCK

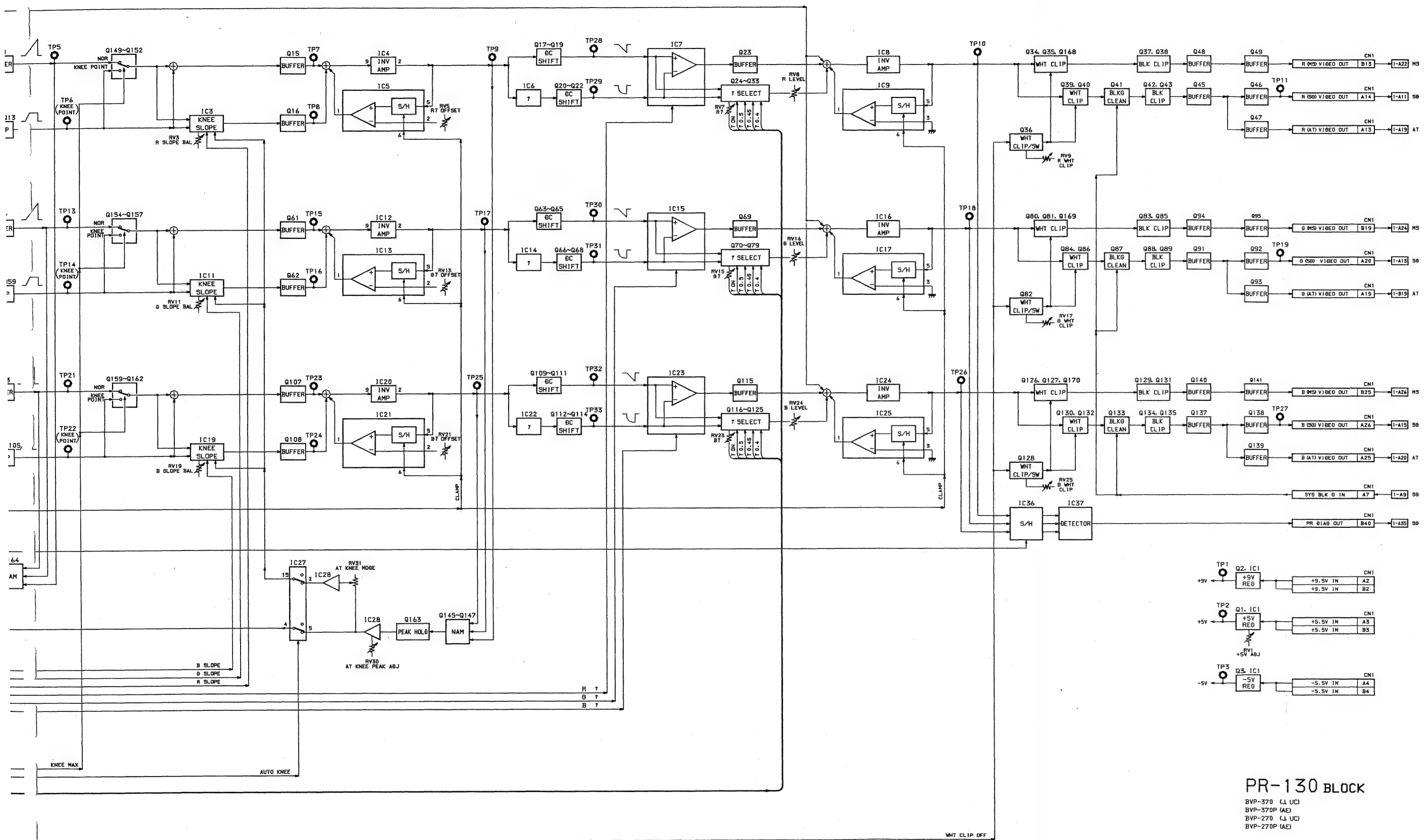


IE-26/26P BLOCK

BVP-370 (J.UC)
BVP-370P (AE)

BVP-370/P





1

2

3

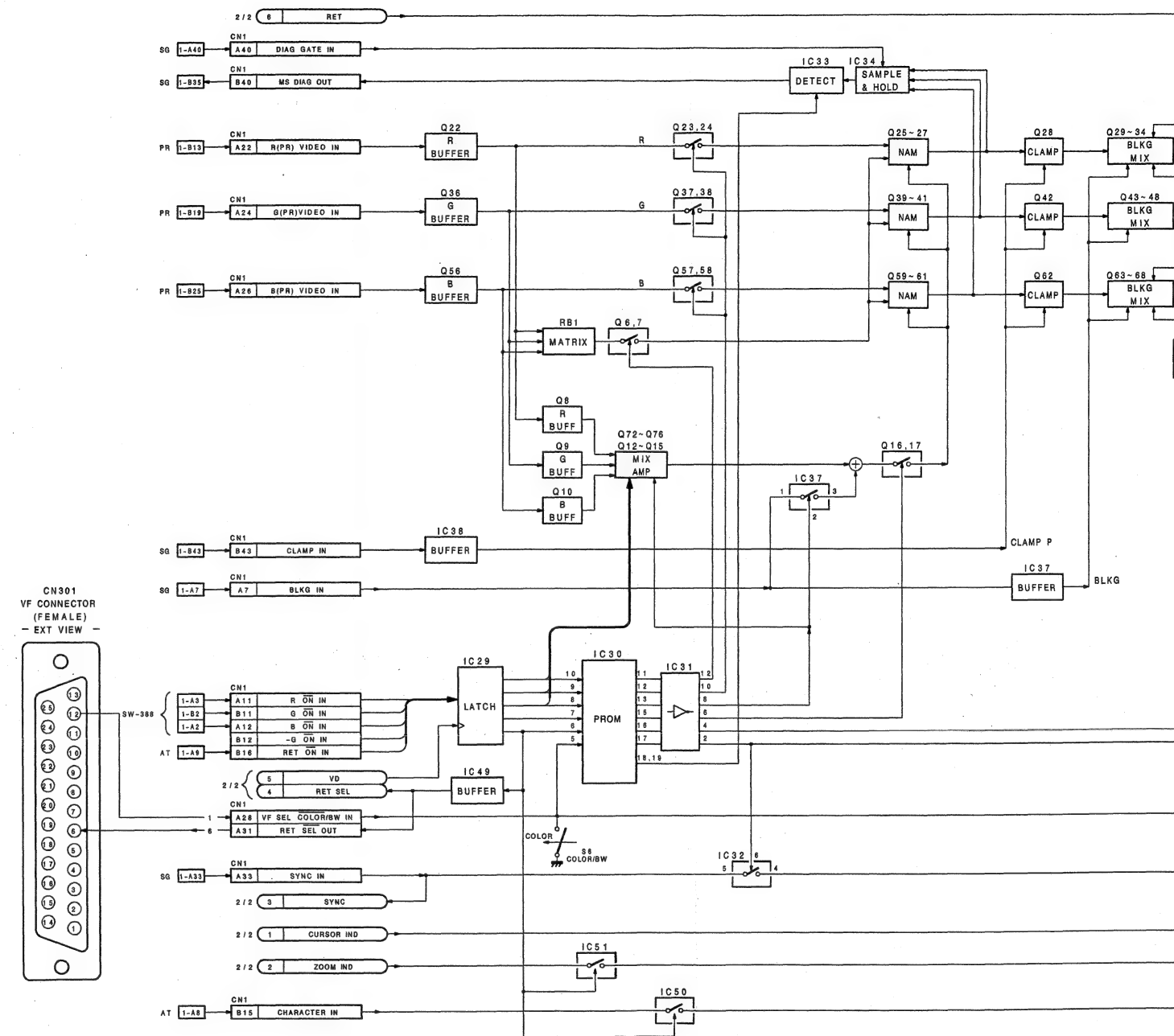
4

5

A-14

A-15

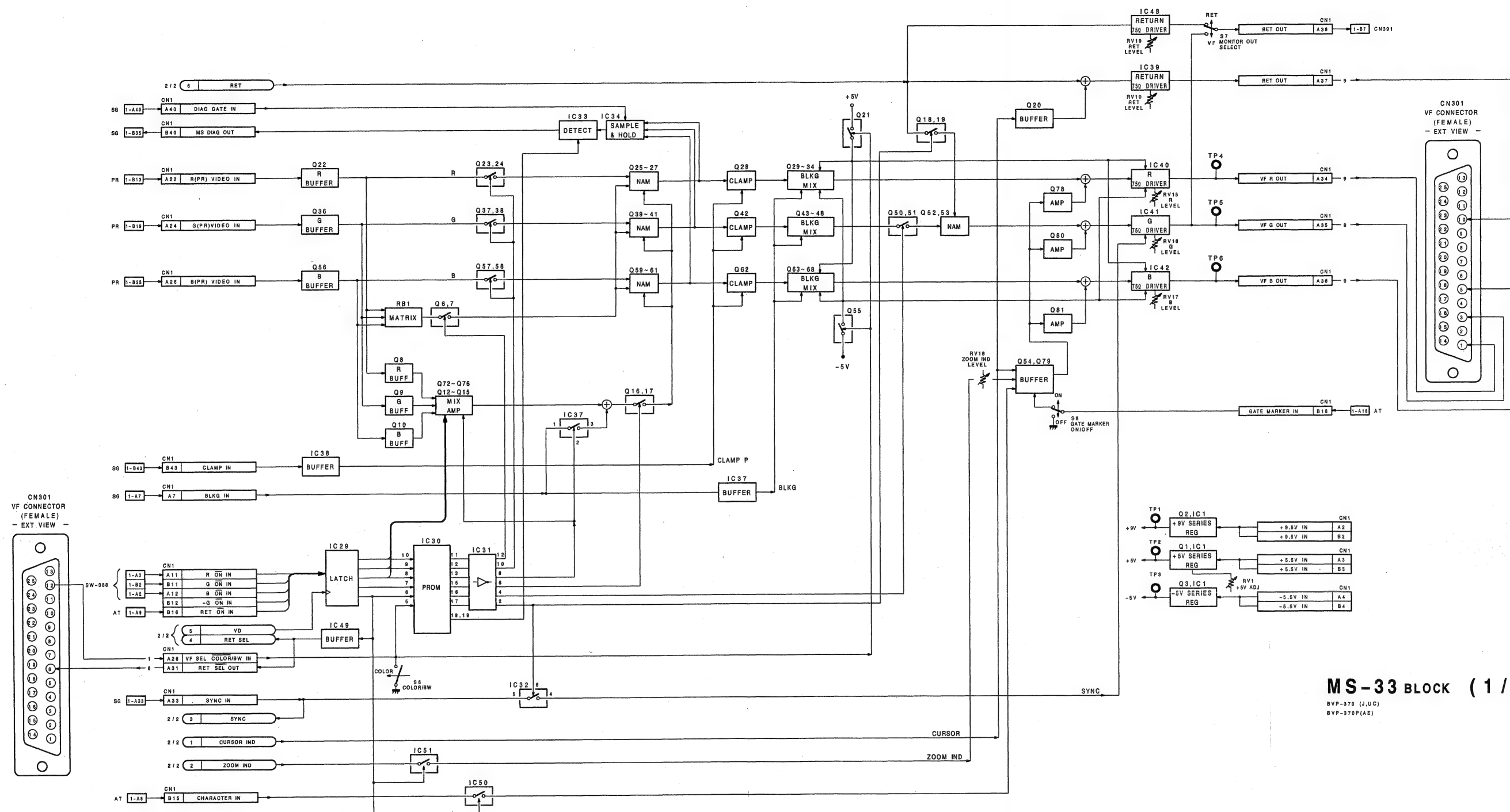
MS-33 BLOCK (1/2)



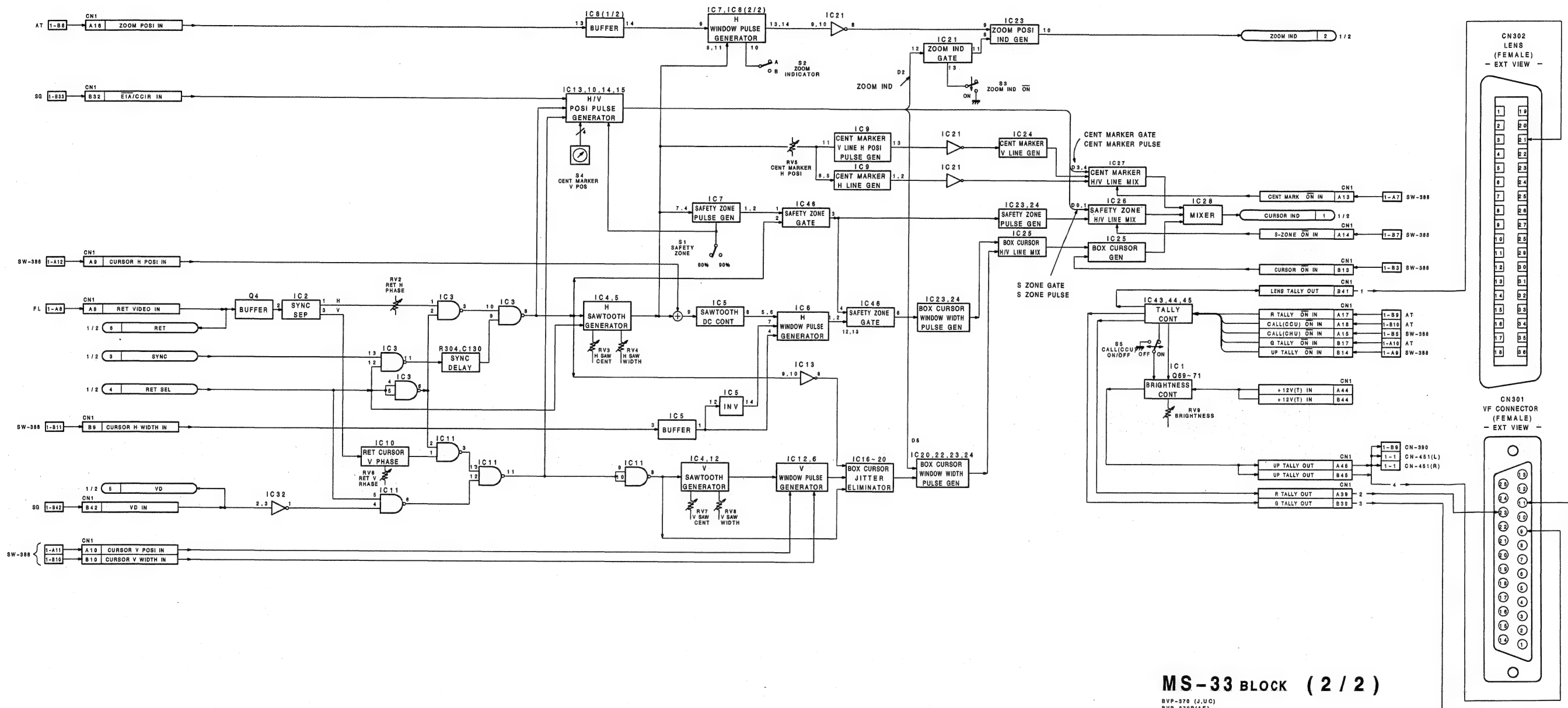
A-16

A-17

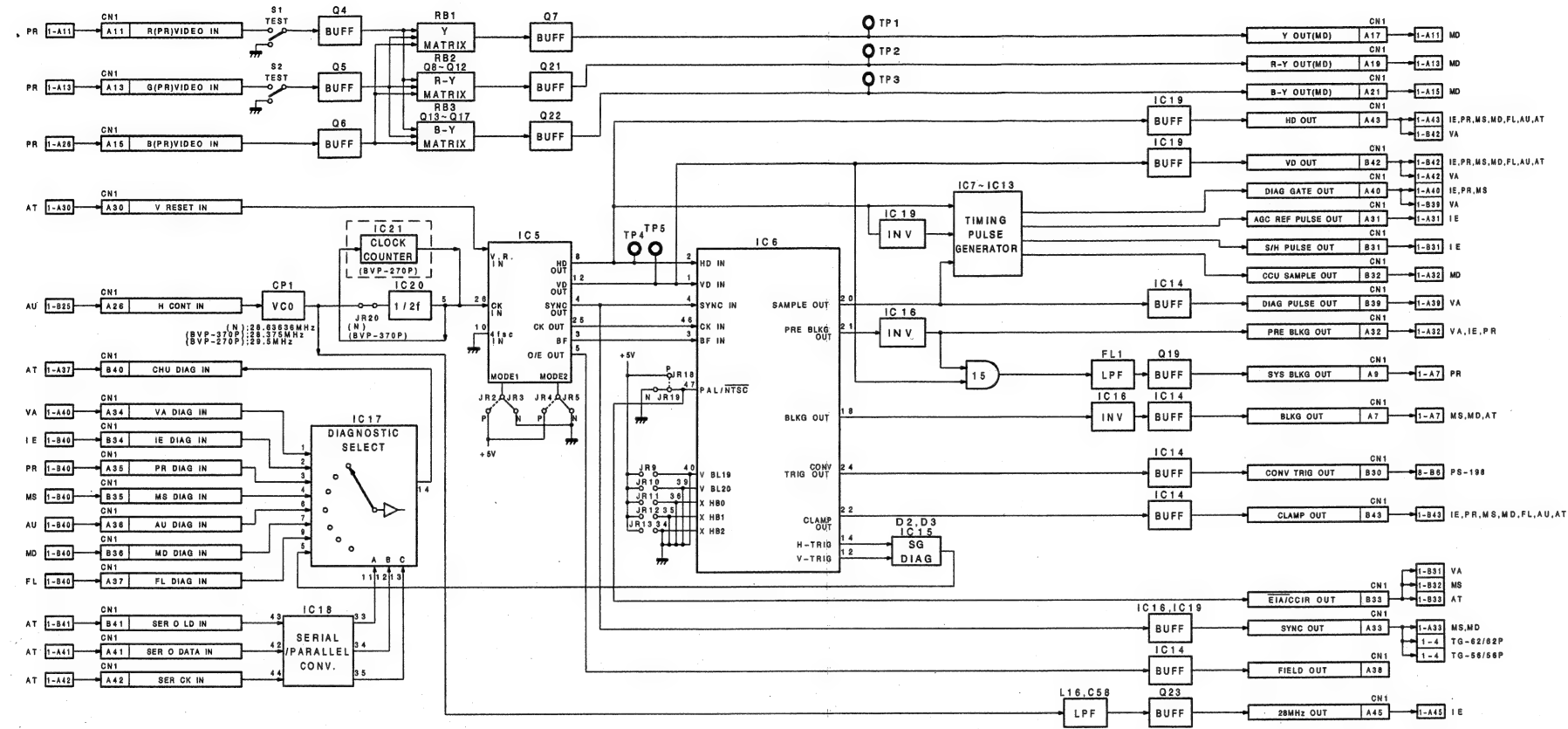
BVP-370 (J,UC)
BVP-370P(AE)



MS-33 BLOCK (2/2)



SG-167/167P/167AP BLOCK



SG-167/167P BLOCK

BVP-370 (J,UC)
BVP-370P(AE)
BVP-370 (J,UC)

SG-167AP BLOCK

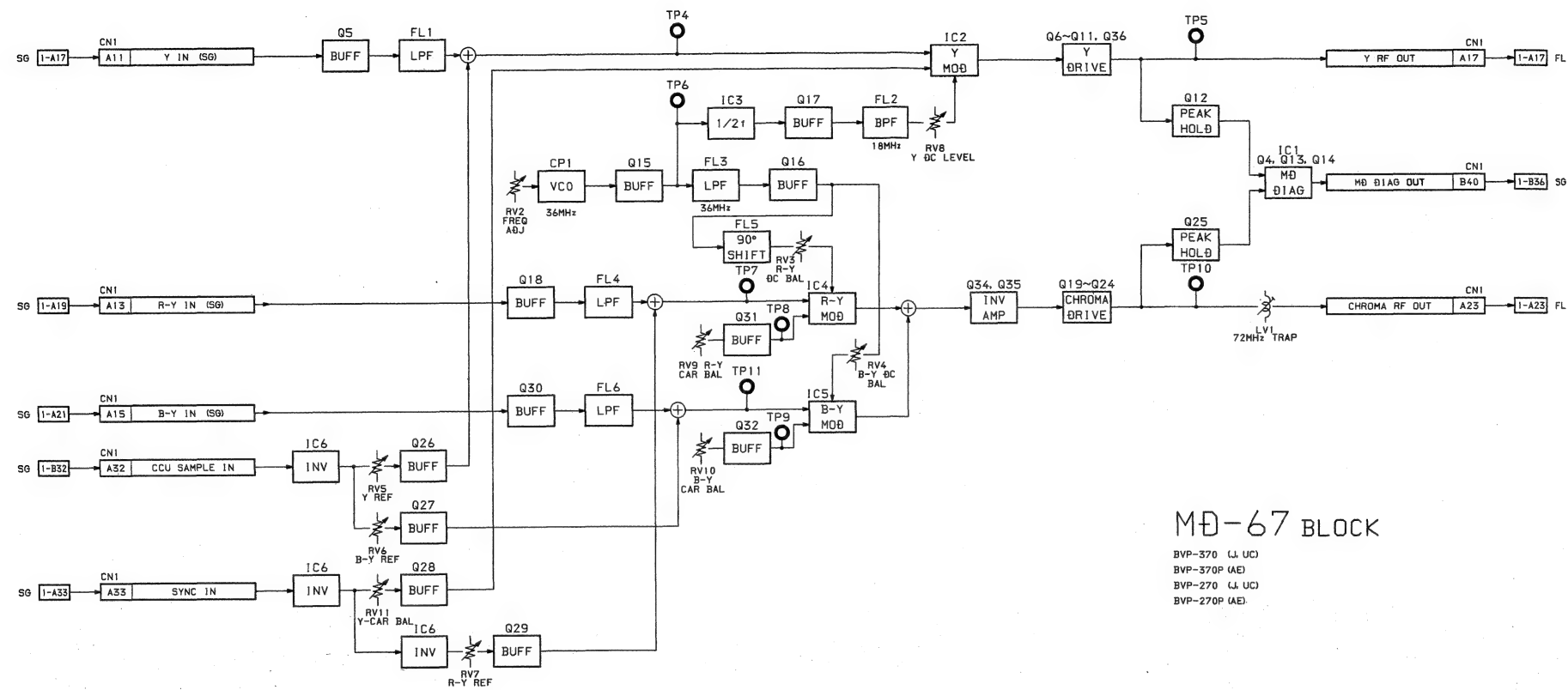
BVP-370P(AE)

A-21

A-22

BVP-370/P
BVP-270/P
H

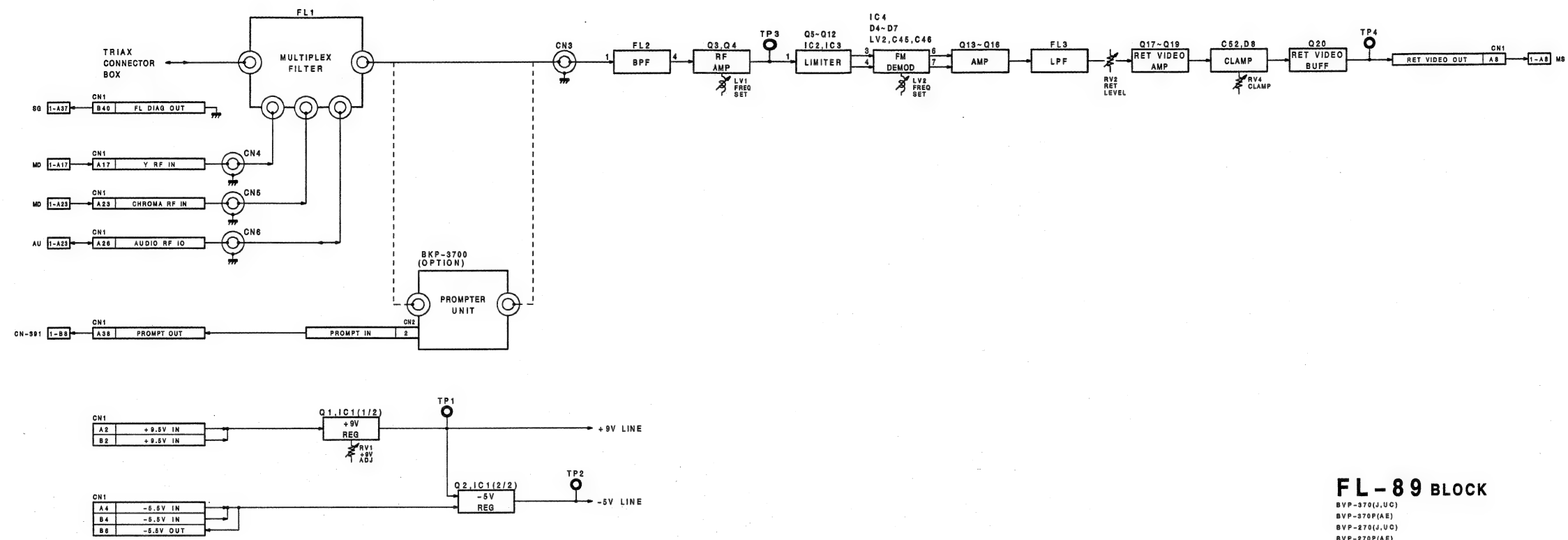
MD-67 BLOCK



MD-67 BLOCK

BVP-370 (J, UC)
BVP-370P (AE)
BVP-270 (J, UC)
BVP-270P (AE)

FL-89 BLOCK



FL-89 BLOCK

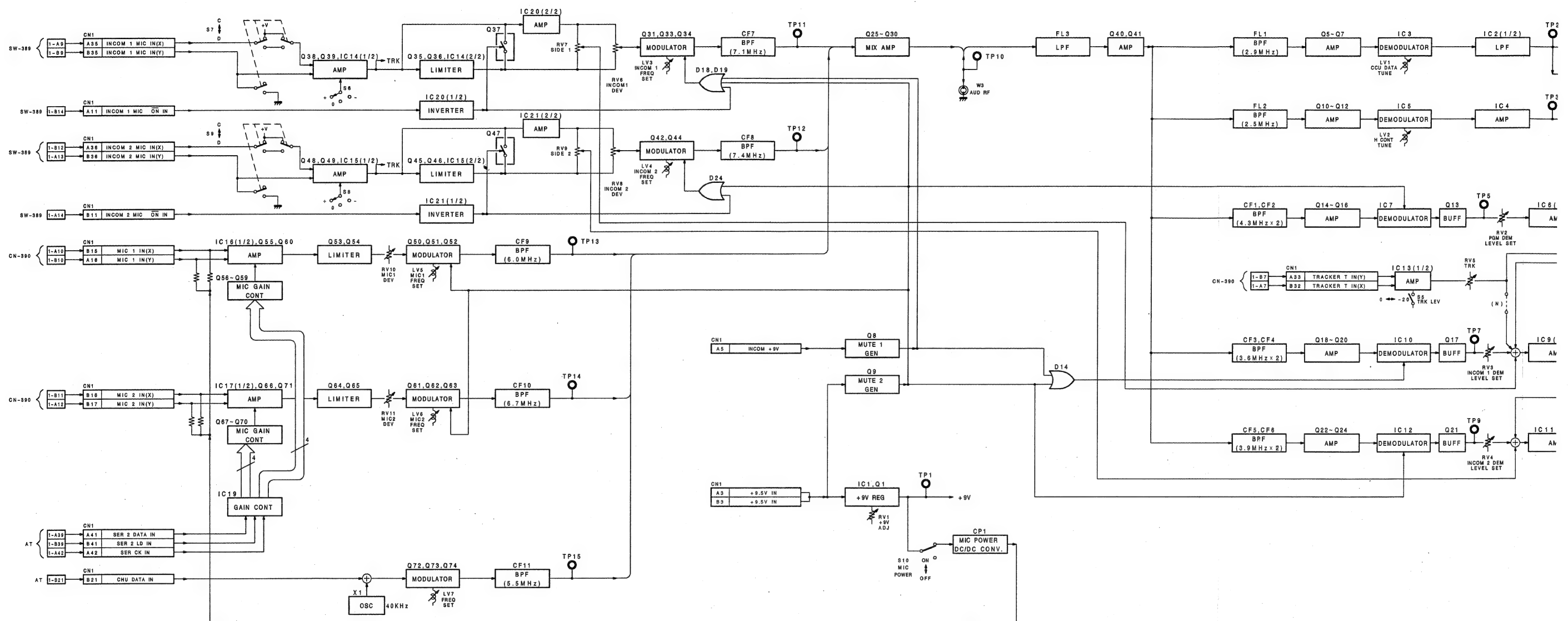
BVP-370(J,UC)
BVP-370P(AE)
BVP-270(J,UC)
BVP-270P(AE)

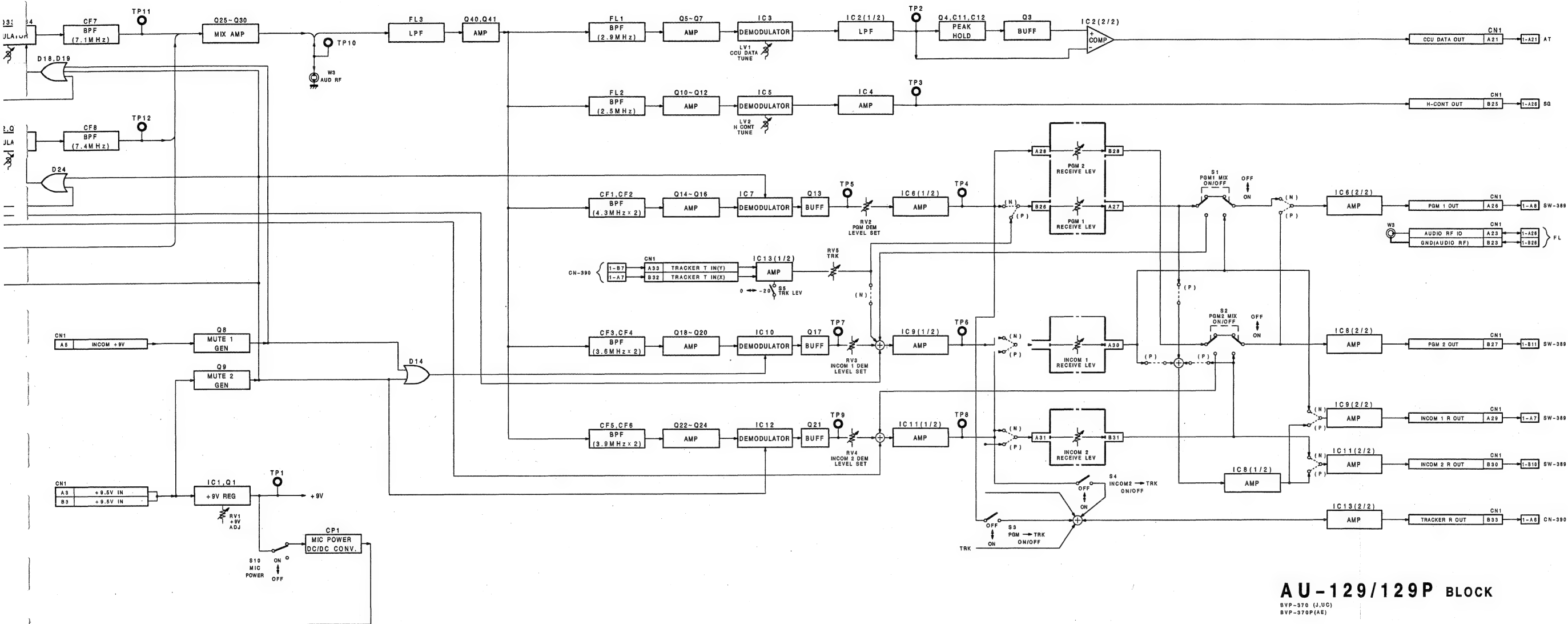
A-25

A-26

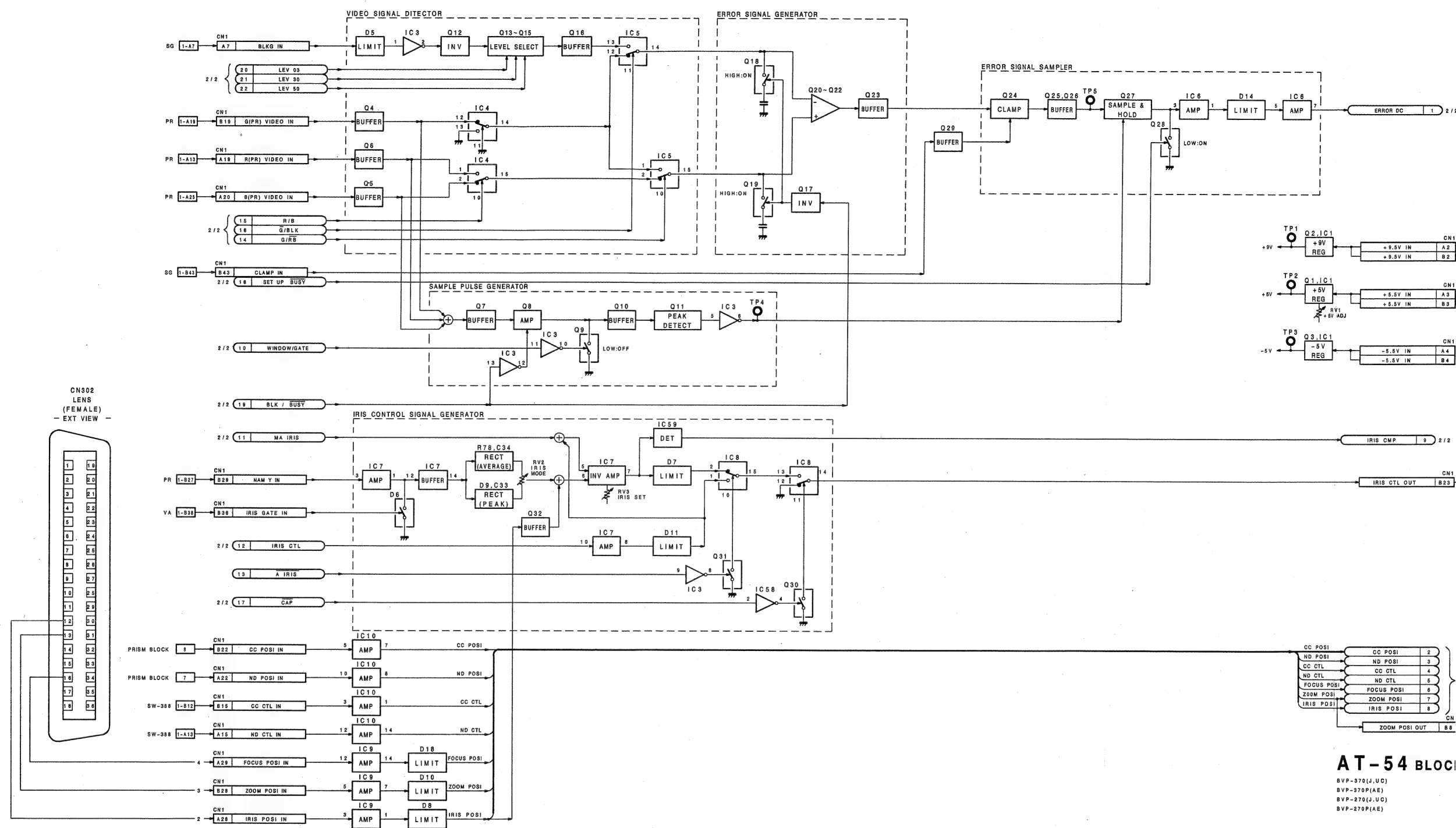
BVP-370/P
BVP-270/P
H

AU-129/129P BLOCK

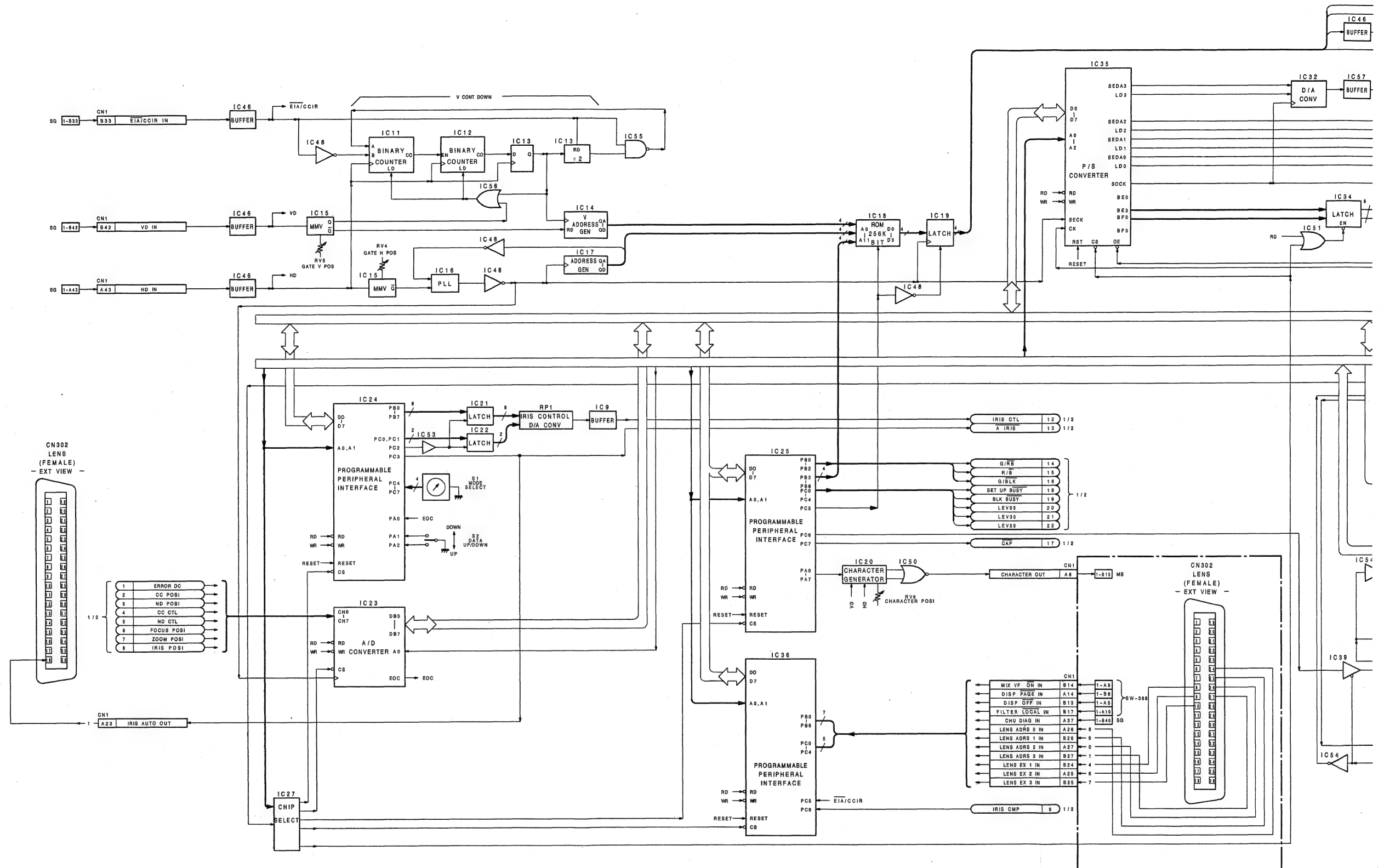


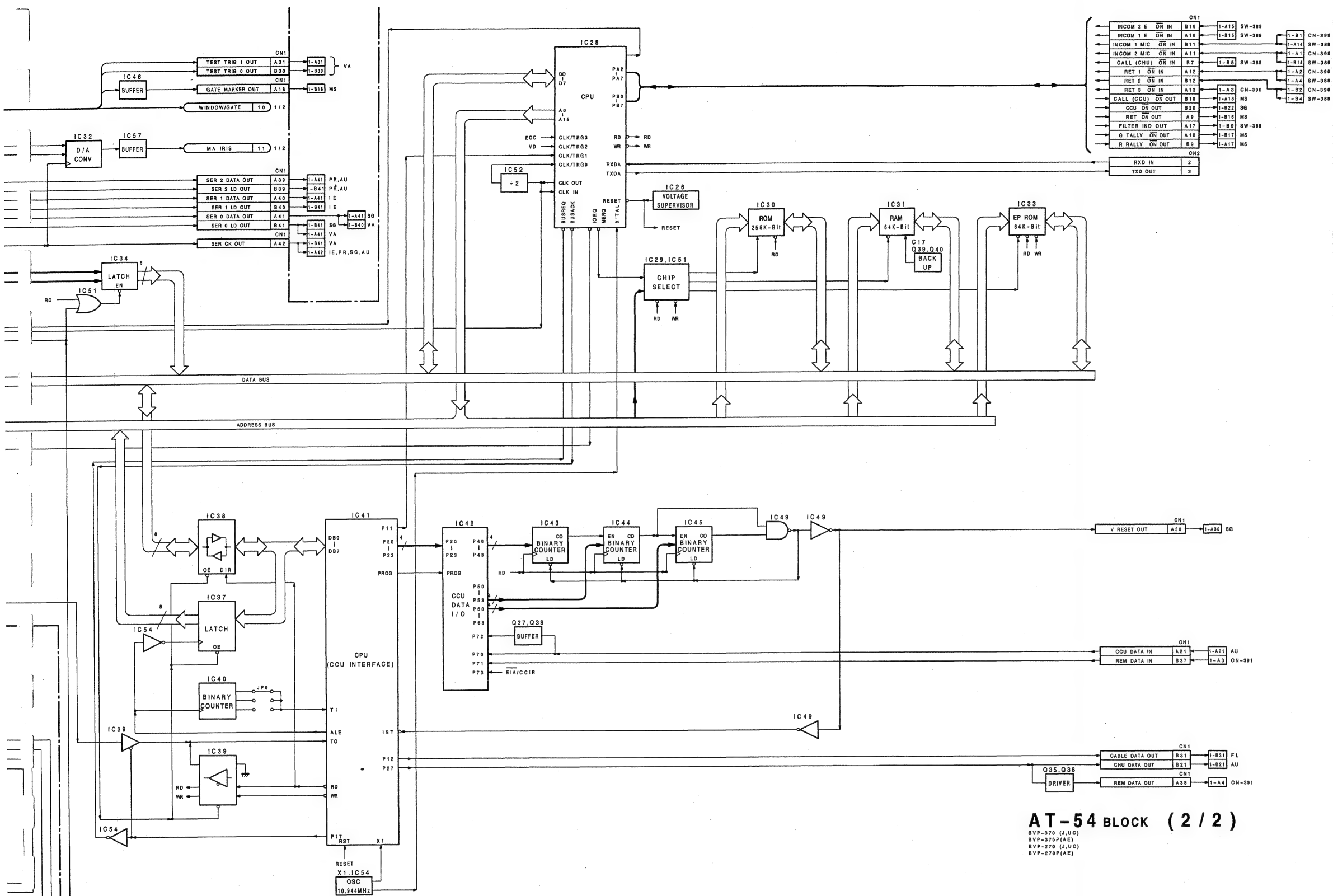


AT-54 BLOCK (1/2)



AT-54 BLOCK (2/2)





AT-54 BLOCK (2 / 2)

BVP-370 (J,UC)
BVP-370P(AE)
BVP-270 (J,UC)
BVP-270P(AE)

1

2

3

4

5

A

B

A-37

C

D

E

F

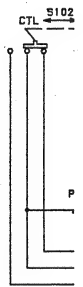
A-38

G

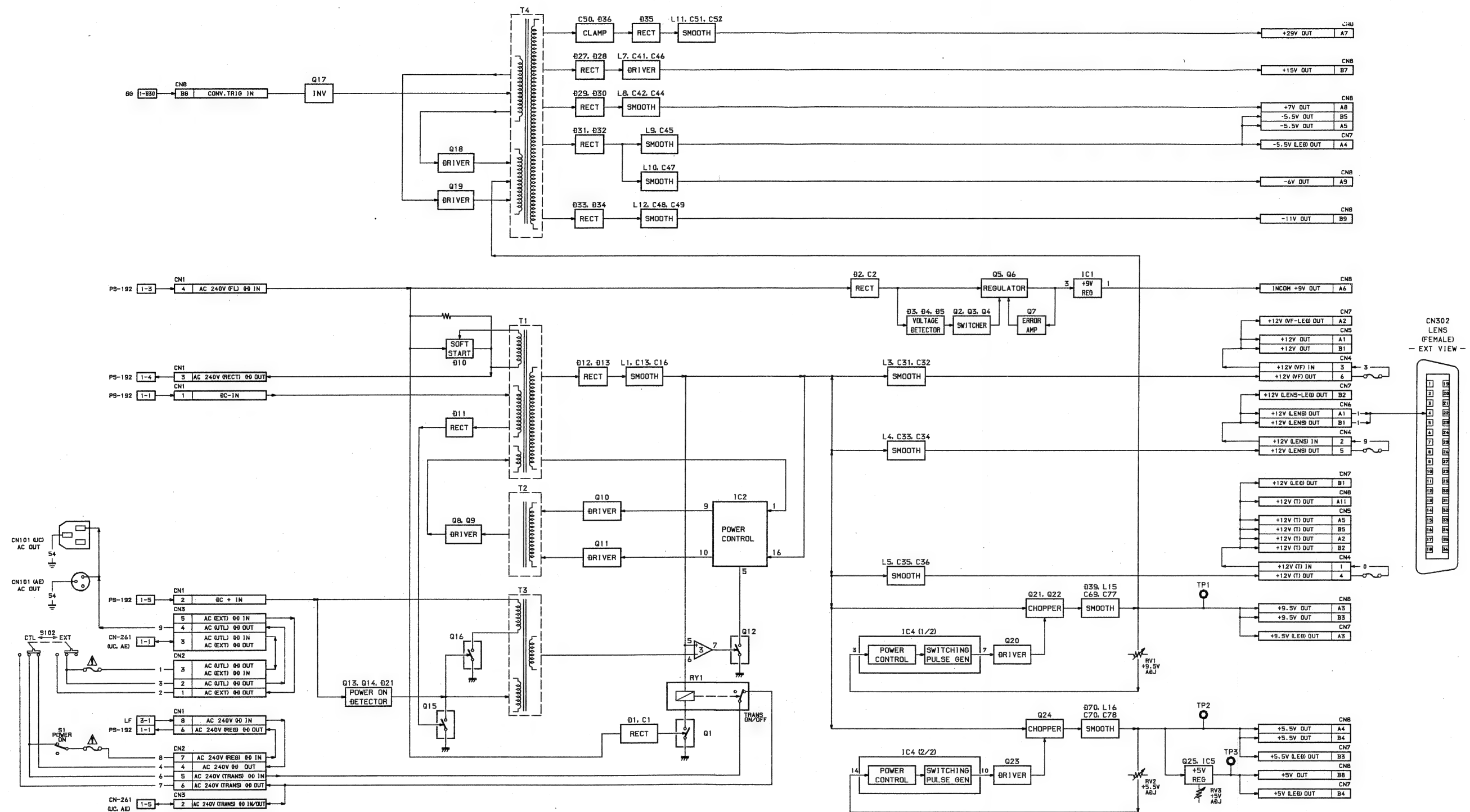
H

CN101 (U) AC OUT

CN101 (AE) AC OUT



PS-198 BLOCK



PS-198 BLOCK

BVP-370 (J UC)
BVP-370P (AE)
BVP-270 (J UC)
BVP-270P (AE)

SECTION B SEMICONDUCTOR

The circuit diagram of IC is obtained from the IC data book published by the manufacturer.

TYPE	PAGE	TYPE	PAGE	TYPE	PAGE
1S1555	B-3	2SK612	B-4	MB7114LPF	B-23
1S1585	B-3	2SK620	B-4	MB88341PF	B-23
1S1588	B-3	B2SK94	B-4		
1S2076A	B-3	3SK163	B-4	MBM27C256A-25	B-24
1S2348H	B-3			MC14001BCP	B-24
1S2835	B-3	74F175SJ	B-5	MC14001BF	B-24
1S2836	B-3	BD703G	B-3	MC14011BF	B-24
1S2837	B-3			MC14015BF	B-24
1S2838	B-3	BX1082	B-5	MC14040BF	B-24
		BX1304	B-5	MC14046BF	B-25
1SS119	B-3	BX1305	B-5	MC14050BF	B-25
1SS123	B-3	BX1356	B-5	MC14053BF	B-25
1SS226	B-3			MC14071BF	B-25
1SS97	B-3	CX7930A	B-6	MC14081BF	B-25
		CX7969	B-8	MC14512BF	B-25
1SZ ? ?	B-3	CX7998	B-9	MC14538BF	B-26
1SZ46A	B-3			MC34182M	B-26
		CXA1065M	B-9		
2SA1122	B-4	CXD1035BQ-Z	B-10	MC74HC4050F	B-26
2SA1156	B-4	CXD1141M	B-15	MC74HC4053F	B-26
2SA1162	B-4	CXD1216M	B-16	MC74HC4316F	B-26
2SA1175	B-4	CXD1217M	B-16	MC74HC4538F	B-27
2SA1226	B-4	CXD1361M	B-17		
2SA1385	B-4	CXD8002	B-18	MN1237A	B-27
2SA1462	B-4	CXD8071Q	B-21	MP7523SOP	B-27
2SA1463	B-4	CXD8072Q	B-22		
2SA812	B-4			MSM80C49GS	B-28
		DTA144EK	B-4	MSM82C55A-5GS	B-29
2SB1295	B-4				
2SB624	B-4	ERA81-004	B-3	NTM2369	B-4
2SB733	B-4	ERA81-005	B-3		
2SB815	B-4	ERA82-004	B-3	RC1496M	B-29
				RC4556MA	B-29
2SC1009A	B-4	ERB81-004	B-3	RC4558M	B-29
2SC1623	B-4				
2SC2458	B-4	ERC81-004	B-3	RC78 ? ? FA	B-30
2SC2542	B-4				
2SC2551	B-4	ESAD85-009	B-3	RD ? ? EB ?	B-3
2SC2712	B-4			RD ? ? EL ?	B-3
2SC2712G	B-4	FC53M	B-3	RD ? ? ESB ?	B-3
2SC2714	B-4			RD ? ? ESL ?	B-3
2SC2757	B-4	HA12412	B-22	RD ? ? MB ?	B-3
2SC2785	B-4				
2SC3115	B-4	HD74AC04P-R	B-22	RH1A	B-3
2SC3150	B-4				
2SC3318	B-4	HSM88AS	B-3	SL3127C	B-30
2SC3327	B-4				
2SC3518	B-4	HZ ? B ? L	B-3	SN74HC04NS	B-30
2SC641K	B-4	HZ ? BLL	B-3	SN74HC163NS	B-30
				SN74HC244NS	B-30
2SD1061	B-4	IC		SN74HC266NS	B-31
2SD1111	B-4			SN74HC574NS	B-31
2SD1271	B-4	LB156	B-3	SN74HC7266NS	B-31
2SD596	B-4			SN74HC74NS	B-31
2SD774	B-4	LM1881N	B-22	SN74HC86NS	B-31
2SD789	B-4	LM35DZ	B-23		
				TA7303P	B-31
2SK160	B-4	MA152WK	B-3		
2SK508	B-4				

SEMICONDUCTOR INDEX

TYPE	PAGE
TC4001BP	B-24
TC4049BF	B-31
TC40H000F	B-31
TC40H002F	B-31
TC40H004F	B-32
TC40H008F	B-32
TC40H032F	B-32
TC40H074F	B-32
TC40H138F	B-32
TC40H163F	B-32
TC40H174F	B-32
TC40H175F	B-33
TC40H244F	B-30
TC40H245F	B-33
TC40H374F	B-33
TC4S01F	B-33
TC4S11F	B-33
TC4S69F	B-33
TC4S71F	B-33
TC4S81F	B-33
TC4SU69F	B-33
TC5564AFL-15	B-34
TC5564APL-15	B-34
TC7S00F	B-34
TC7S04F	B-34
TC7S08F	B-34
TC7S32F	B-34
TL062CP	B-34
TL062CPS	B-34
TL064CNS	B-35
TL082CPS	B-35
TL1451ACN	B-35
TL494CN	B-35
TL7700CPS	B-35
TLC27L2CPS	B-35
TLC27L4CNS	B-35
TLG113A	B-3
TMPZ84C015AF	B-36
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TMPZ84C015BF-6	B-36
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uPC393C	B-37
uPC393G2	B-37
uPC812G2	B-37
uPD27C512G-20	B-37
uPD28C64C-25	B-37
uPD7004C	B-38
uPD82C43G	B-38
V09G	B-3

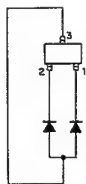
TYPE	PAGE
XN6435	B-4
XN6534	B-4

DIODE



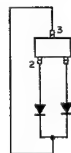
1S1555
1S1585
1S1588
1S2076A
1S2348H
1SS119
RH1A

TOP VIEW (SCALE 4/1)



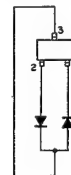
1S2837
1S2838
MA152WK

TOP VIEW (SCALE 4/1)



1S2837
1S2838

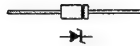
TOP VIEW (SCALE 4/1)



1SS123
1SS226
HSM88AS



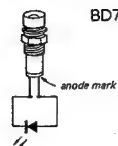
1SS97
ERA81-004
ERA81-005
ERA82-004
ERB81-004
ERC81-004



1SZ ? ?
HZ ? B ? L
HZ ? BLL
RD ? ? EB ?
RD ? ? EL ?
RD ? ? ESB ?
RD ? ? ESL ?



1SZ46A



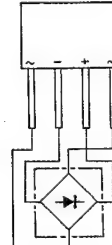
BD703G ; GREEN



ESAD85-009



FC53M



LB156

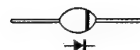
TOP VIEW (SCALE 4/1)



RD ? ? MB ?



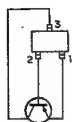
TLG113A ; GREEN



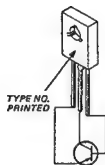
V09G

TRANSISTOR

TOP VIEW (SCALE 4/1)



2SA1122
2SA1162
2SA1226
2SA1462
2SA812
2SB1295
2SB624
2SB815

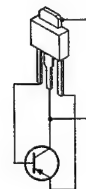


2SA1156

TYPE NO.
PRINTED

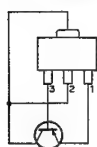


2SA1175



2SA1385

TOP VIEW (SCALE 4/1)

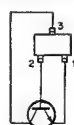


2SA1463



2SB733

TOP VIEW (SCALE 4/1)



2SC1009A
2SC1623
2SC2712
2SC2712G
2SC2714
2SC2757
2SC3115
2SD596
NTM2369



2SC2458
2SC3327



2SC2542
2SD1061
2SD1271



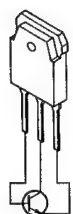
2SC2551
2SC641K



2SC2785



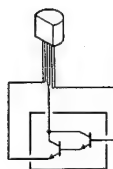
2SC3150



2SC3318



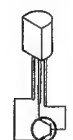
2SC3518



2SD1111

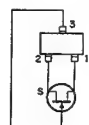


2SD774



2SD789

TOP VIEW (SCALE 4/1)

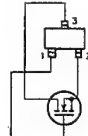


2SK160
2SK508
2SK94

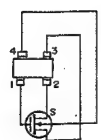


2SK612

TOP VIEW (SCALE 2/1)

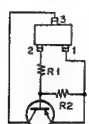


2SK620

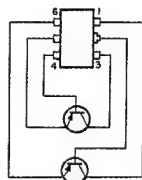


3SK163

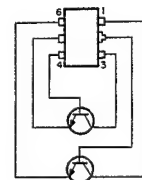
TOP VIEW (SCALE 4/1)



DTA144EK (R1 = 47K, R2 = 47K)

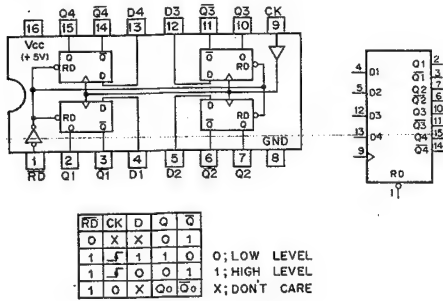


XN6435

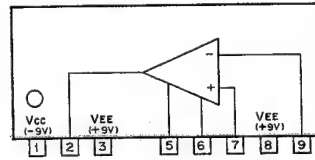


XN6534

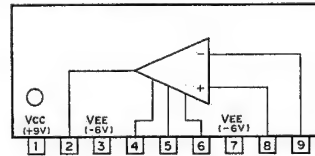
74F175SJ (FSC) FLAT PACKAGE
TTL D-TYPE FLIP-FLOP WITH CLEAR
- TOP VIEW -



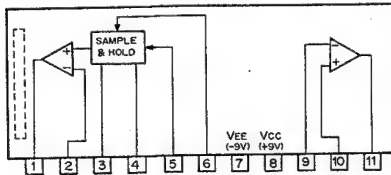
BX1305 (SONY)
VIDEO AMPLIFIER
- PRINTED SIDE -



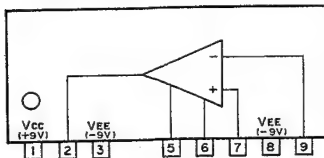
BX1356 (SONY)
VIDEO OUTPUT AMPLIFIER
- PRINTED SIDE -



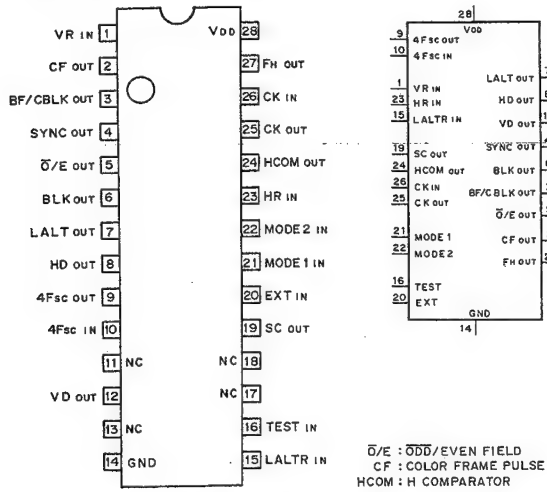
BX1082 (SONY)
OPERATIONAL AMPLIFIER
- REAR VIEW -



BX1304 (SONY)
VIDEO AMPLIFIER
- PRINTED SIDE -



CX7930A (SONY) ($V_{DD} = +5V$) FLAT PACKAGE
 CMOS SYNC GENERATOR (NTSC, PAL-M, PAL, SECAM)
 - TOP VIEW -

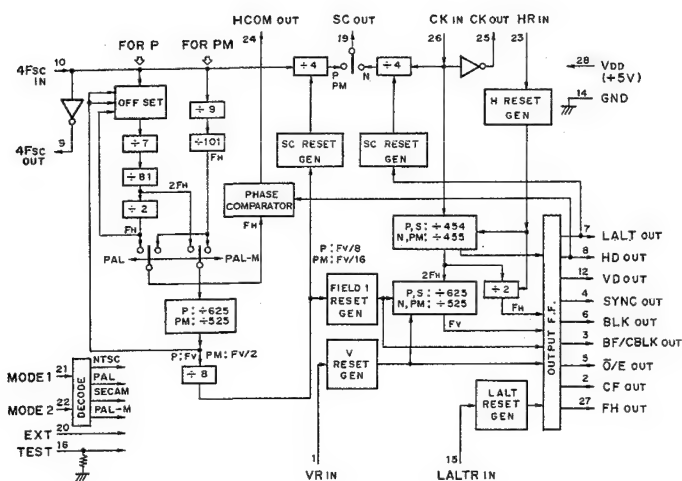


SYSTEM	4Fsc	CLOCK
NTSC	910 FH	910 FH
PAL	1135 FH+2 Fv	908 FH
PALM	909 FH	910 FH
SECAM		908 FH

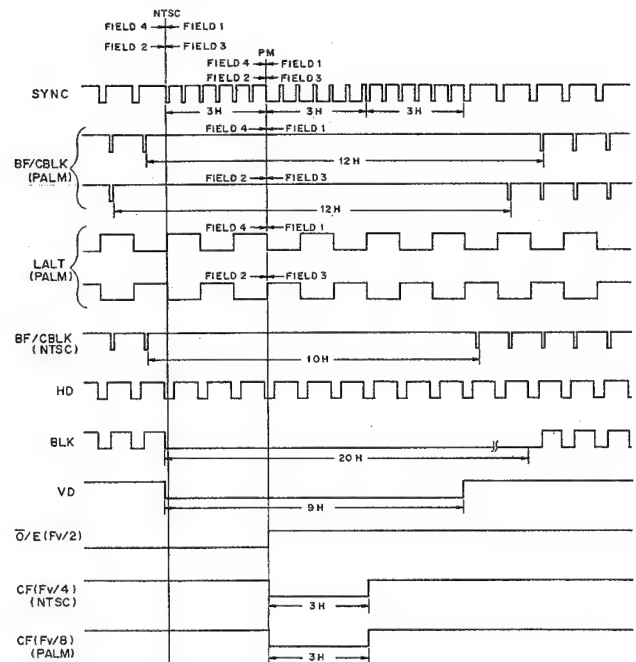
INPUTS	MODE 1	MODE 2	SYSTEM
0	0	0	NTSC
0	1	0	SECAM
1	0	1	PALM
1	1	1	PAL

INPUTS	EXT	TEST	FUNCTION
0	0	0	INTERNAL
0	1	0	INVALID
1	0	0	EXT
1	1	1	TEST

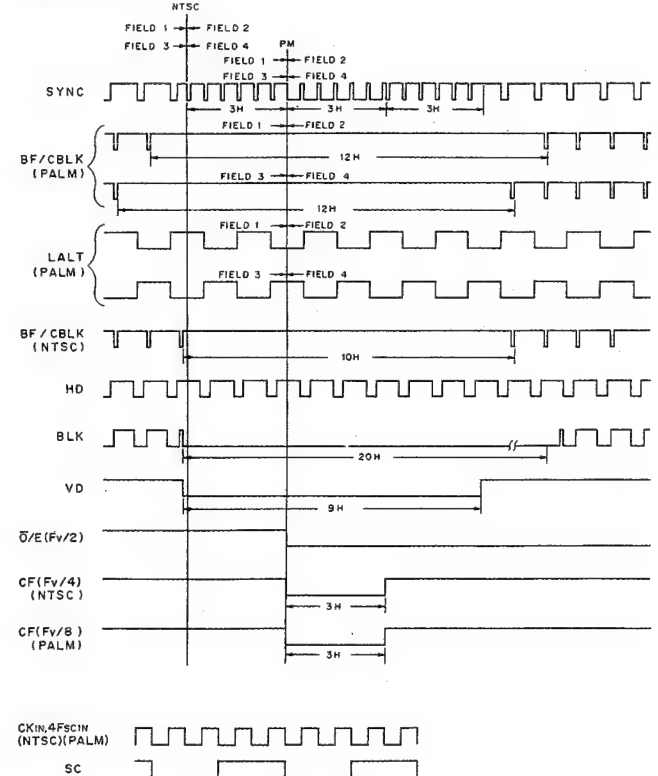
0 : LOW LEVEL (GND)
 1 : HIGH LEVEL (V_{DD})
 TEST "0": OPEN (INTERNALLY PULLED DOWN)



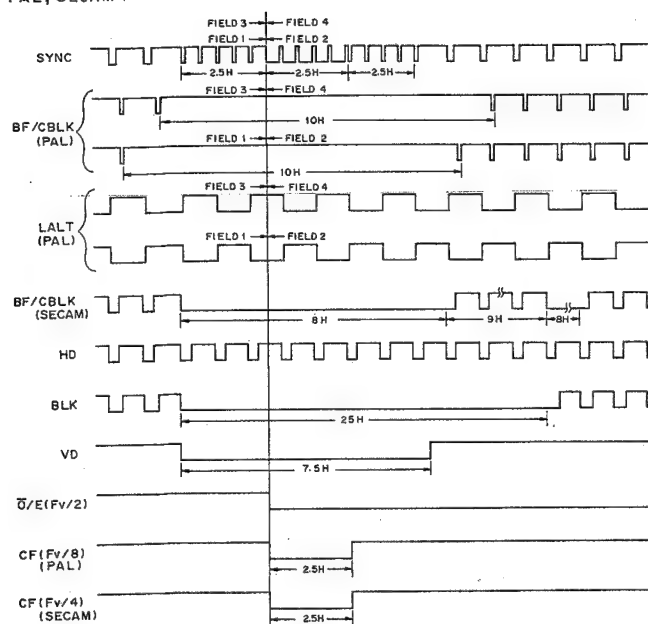
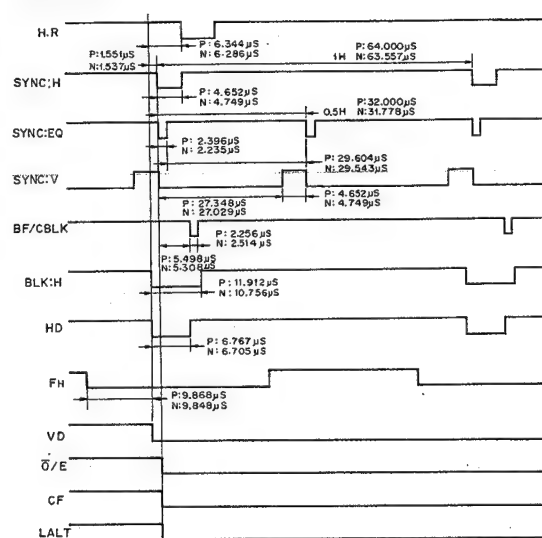
NTSC, PAL-M (FIELD 1,3)



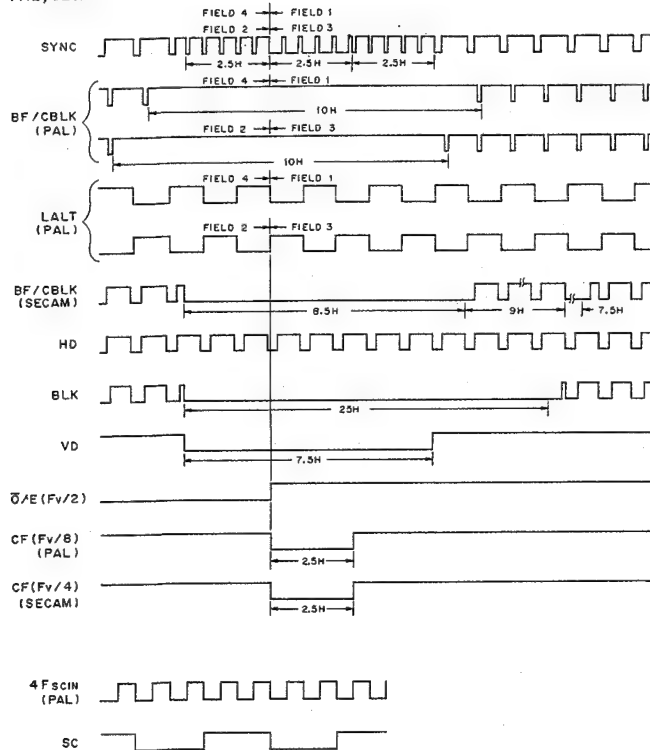
NTSC, PAL-M (FIELD 2,4)



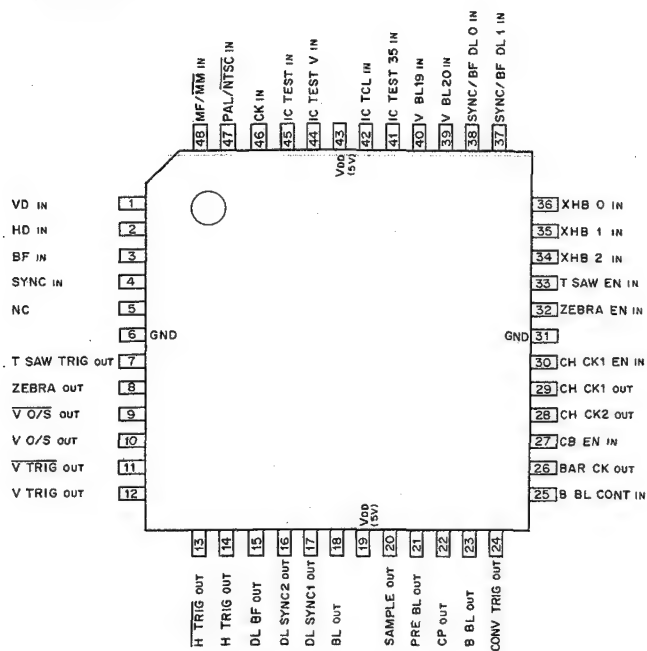
PAL, SECAM (FIELD 4, 2)

P: PAL, SECAM
N: NTSC, PALM

PAL, SECAM (FIELD 1, 3)



CX7969 (SONY)
CMOS PULSE GENERATOR
- TOP VIEW -



1. SYSTEM DESIGNATION

INPUT	SYSTEM
PAL/NTSC IN	
1	PAL, SECAM
0	NTSC, PALM

2. TYPE OF TUBE

INPUT	FUNCTION
MF/MM IN	
1	MAG-STA TUBE
0	MAG-MAG TUBE

3. V BLKG WIDTH (NTSC ONLY)

INPUT	V BL 19	V BL 20	V BLKG WIDTH
1	X		19H
0	1		20H
0	0		21H

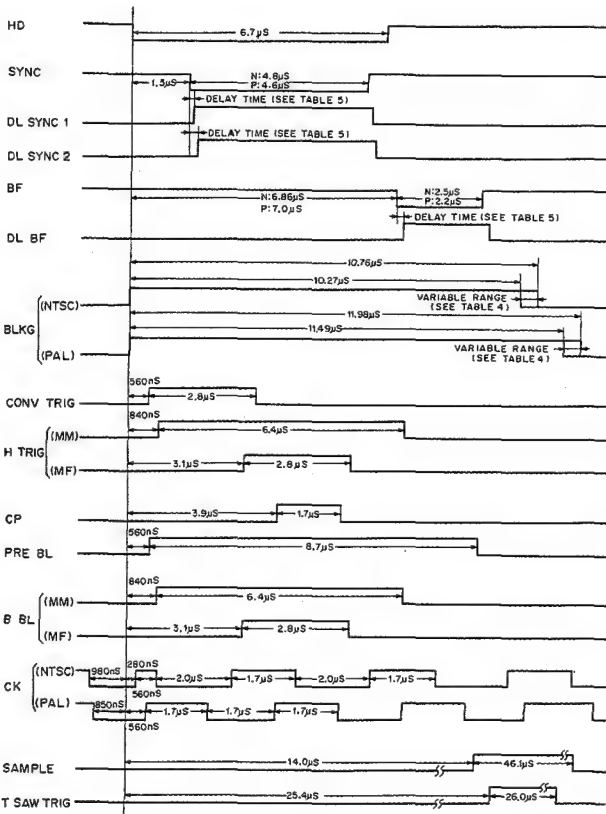
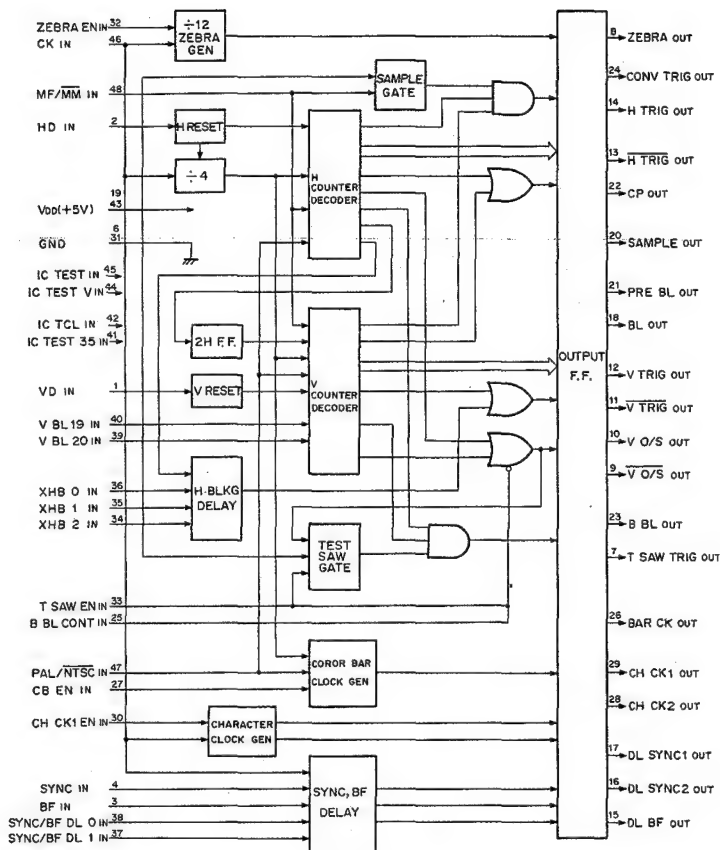
4. H BLKG WIDTH

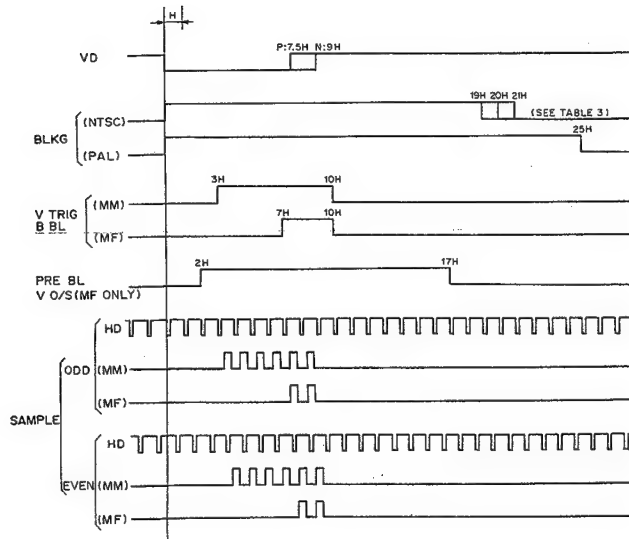
INPUT	BLKG WIDTH (μS)	NTSC	PAL
XHB2 XHB1 XHB0			
1 1 1	10.27	11.49	
1 1 0	10.34	11.56	
1 0 1	10.41	11.63	
1 0 0	10.48	11.70	
0 1 1	10.55	11.77	
0 1 0	10.62	11.84	
0 0 1	10.69	11.91	
0 0 0	10.76	11.98	

5. DELAY TIME

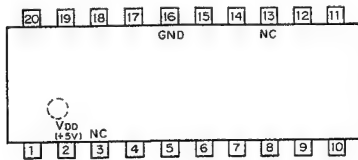
INPUT	DELAY TIME (nS)	DL SYNC 1	DL SYNC 2	DL BF
SYNC/BF DL 1 SYNC/BF DL 2				
1 1	140	210	140	
1 0	210	280	210	
0 1	630	700	630	
0 0	700	770	700	

1: HIGH LEVEL
0: LOW LEVEL
X: DON'T CARE



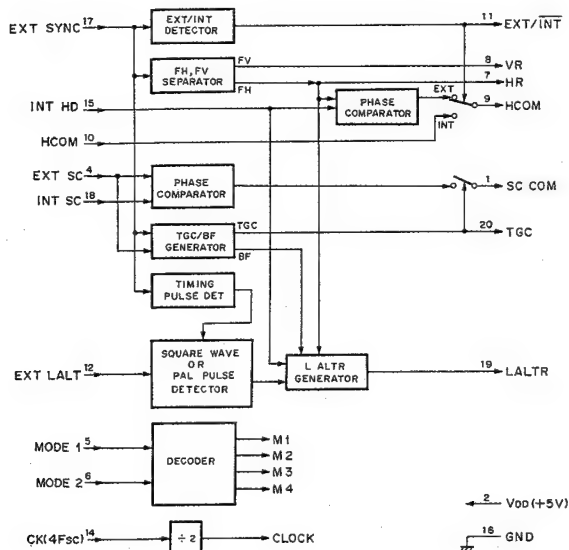


CX7998 (SONY) FLAT PACKAGE
C-MOS GENLOCK DRIVER
- TOP VIEW -

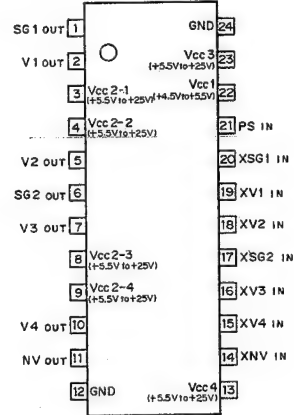


INPUTS		EXT LOCK MODE	
MODE 1	MODE 2	M 1	M 2
0	0	PAL-VBS	
1	0	PAL-M-VBS	
0	1	PAL-VS/SC/LALT	
1	1	SECAM-VS/SC/LALT	
		NTSC-VBS	
		NTSC-VS/SC	
		PAL-M-VS/SC/LALT	

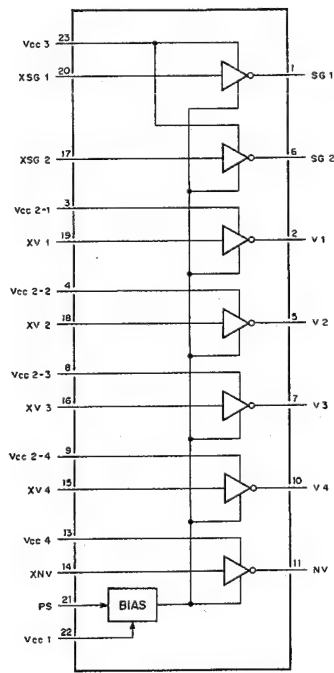
0; LOW LEVEL
1; HIGH LEVEL



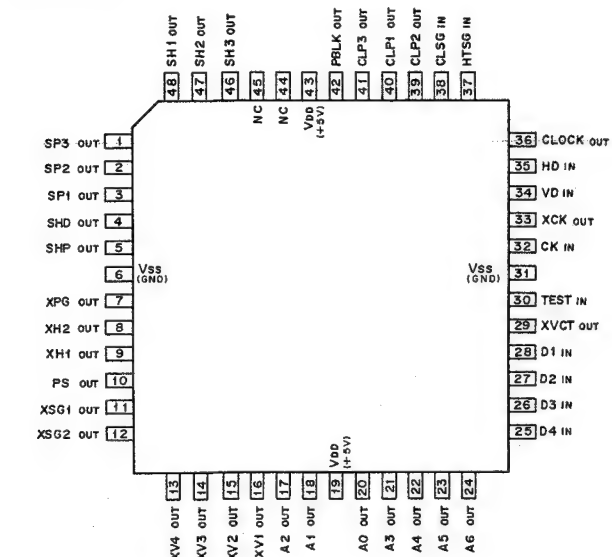
CXA1065M (SONY) FLAT PACKAGE
INVERTING DRIVER FOR CCD CLOCK WITH POWER SAVE
- TOP VIEW -



XV1-XV4; VERTICAL REGISTER TRANSMISSION CLOCK INPUT
V1 - V4; VERTICAL REGISTER TRANSMISSION CLOCK OUTPUT
XSG1, XSG2; SENSOR GATE PULSE INPUT
SG1, SG2; SENSOR GATE PULSE OUTPUT
XNV; DRIVER INPUT
NV; DRIVER OUTPUT
PS; POWER SAVE INPUT
Vcc 1; BIAS VOLTAGE
Vcc 2-1; V1 OUTPUT PULSE VOLTAGE
Vcc 2-2; V2 OUTPUT PULSE VOLTAGE
Vcc 2-3; V3 OUTPUT PULSE VOLTAGE
Vcc 2-4; V4 OUTPUT PULSE VOLTAGE
Vcc 3; SG1, SG2 OUTPUT PULSE VOLTAGE
Vcc 4; NV OUTPUT PULSE VOLTAGE



CXD1035BQ-Z (SONY) FLAT PACKAGE
C-MOS TIMING PULSE GENERATOR FOR CCD CAMERA
- TOP VIEW -

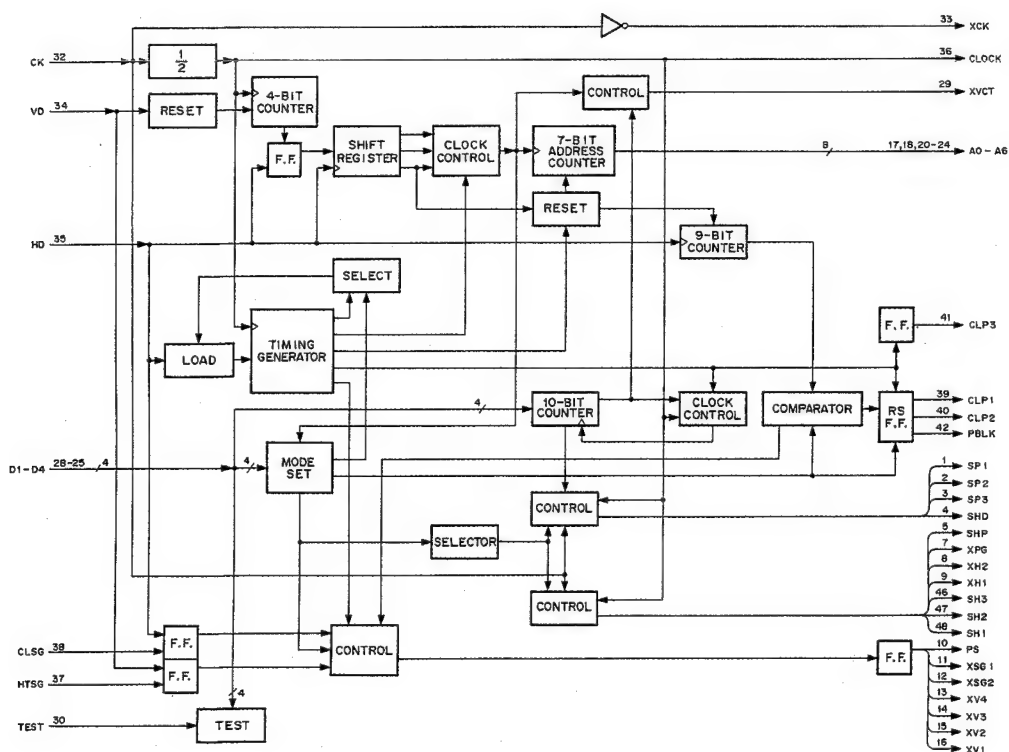
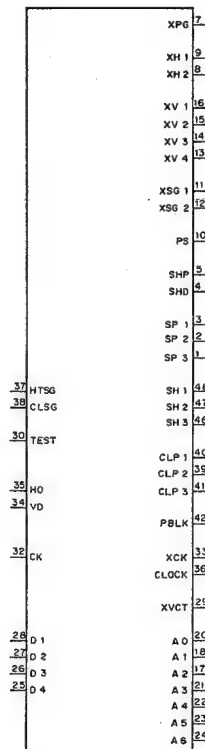


MODE SELECTION WITHOUT ROM

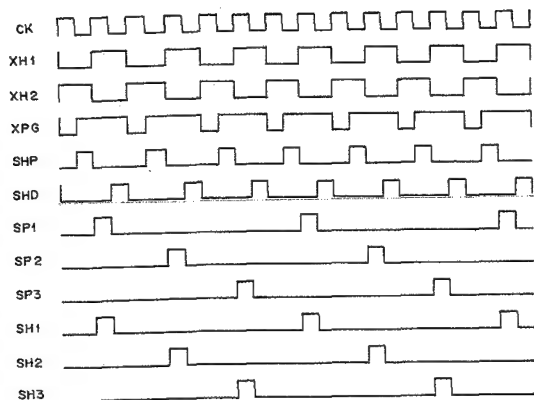
	HIGH (V _{DD}) LEVEL	LOW (V _{SS}) LEVEL
D1	*	
D2	1-CHIP COLOR	B/W, 3-CHIP COLOR
D3	FRAME	FIELD
D4	EIA (NTSC, PAL-M)	CCIR (PAL, SECAM)

D1 - D4 : EXTERNAL ROM DATA INPUT
A0 - A6 : EXTERNAL ROM ADDRESS OUTPUT

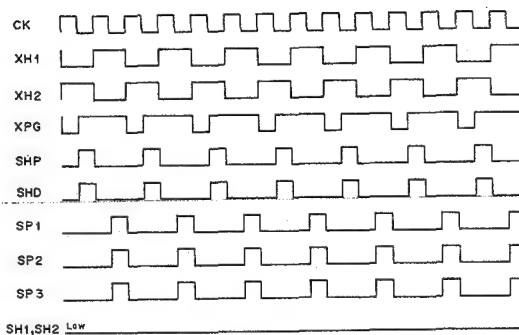
* Connect D1 to GND without ROM (ROM OFF)



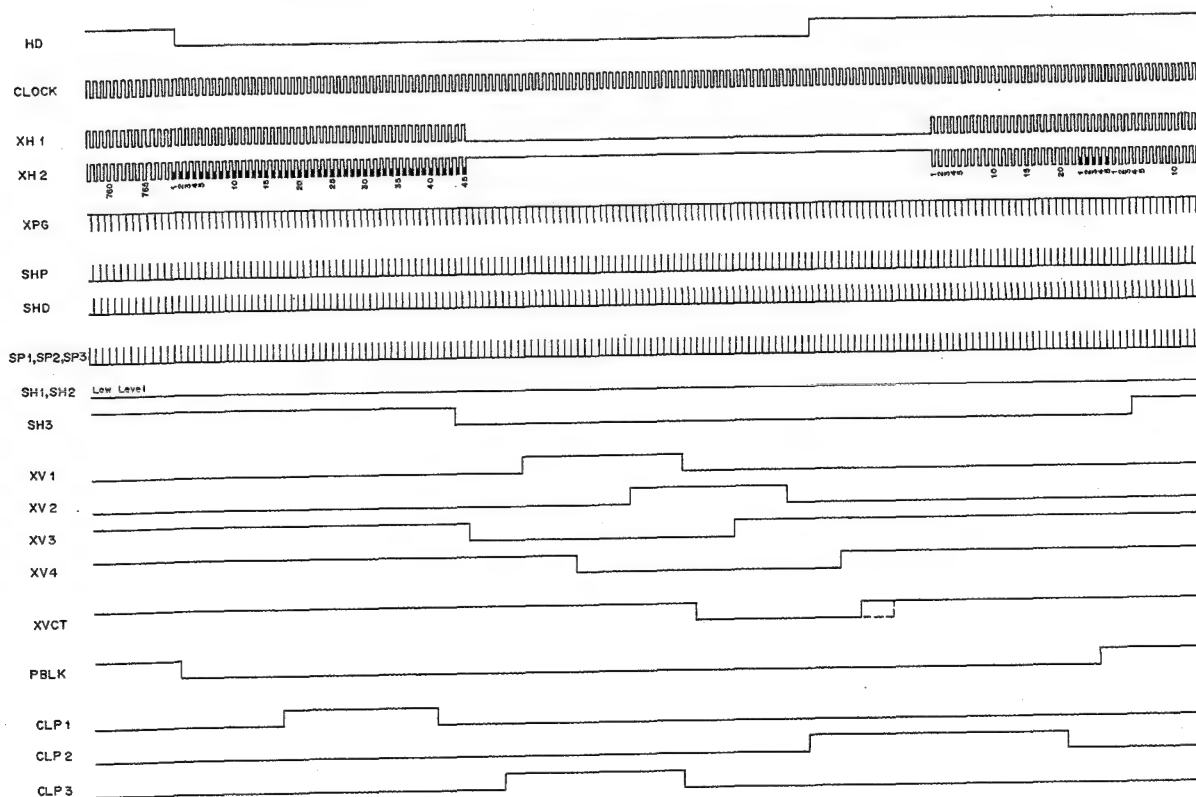
1-CHIP COLOR



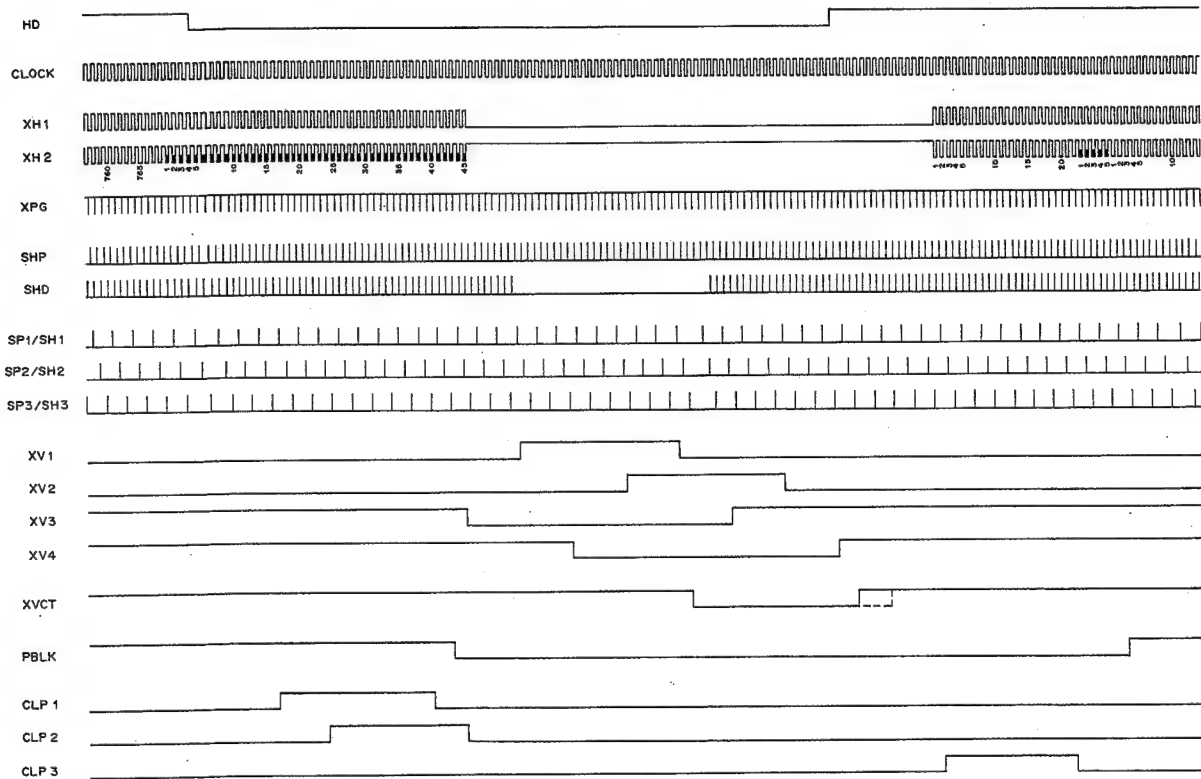
B/W, 3-CHIP COLOR



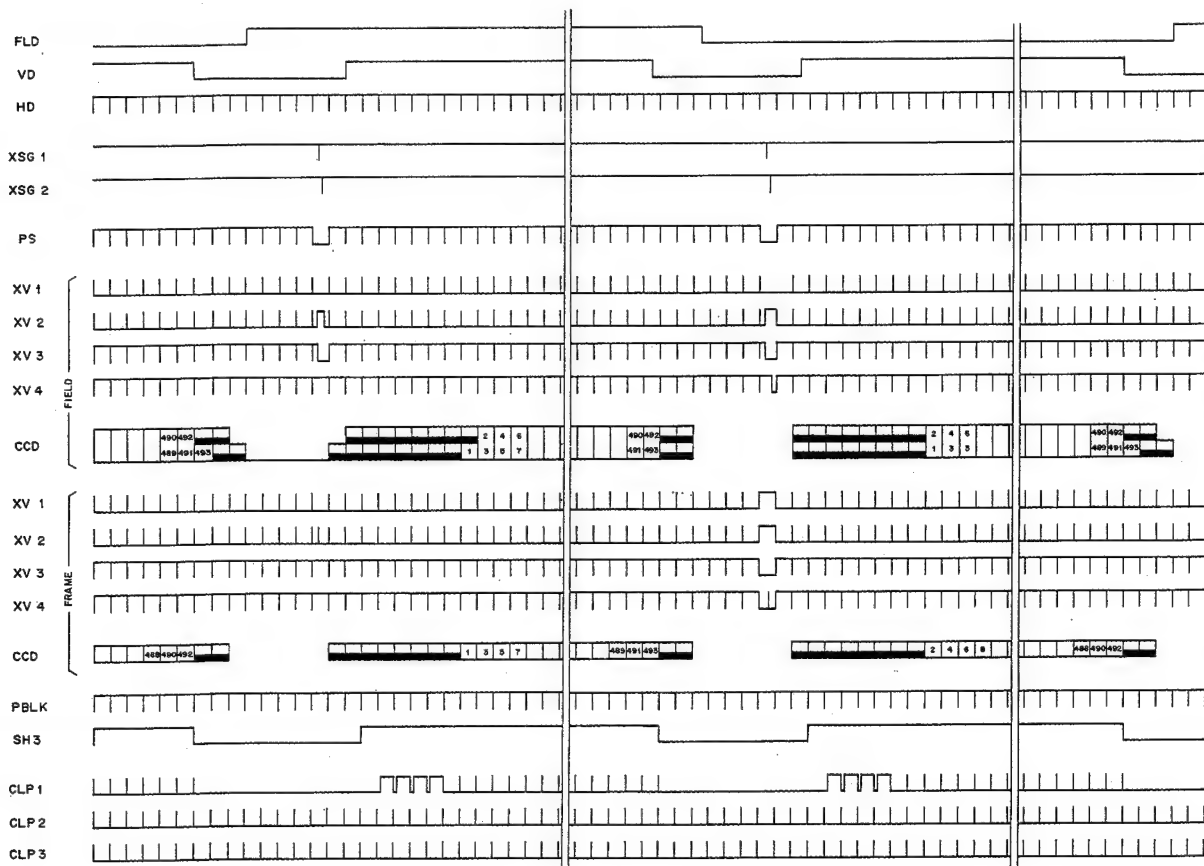
EIA (NTSC, PALM) B/W, 3-CHIP COLOR



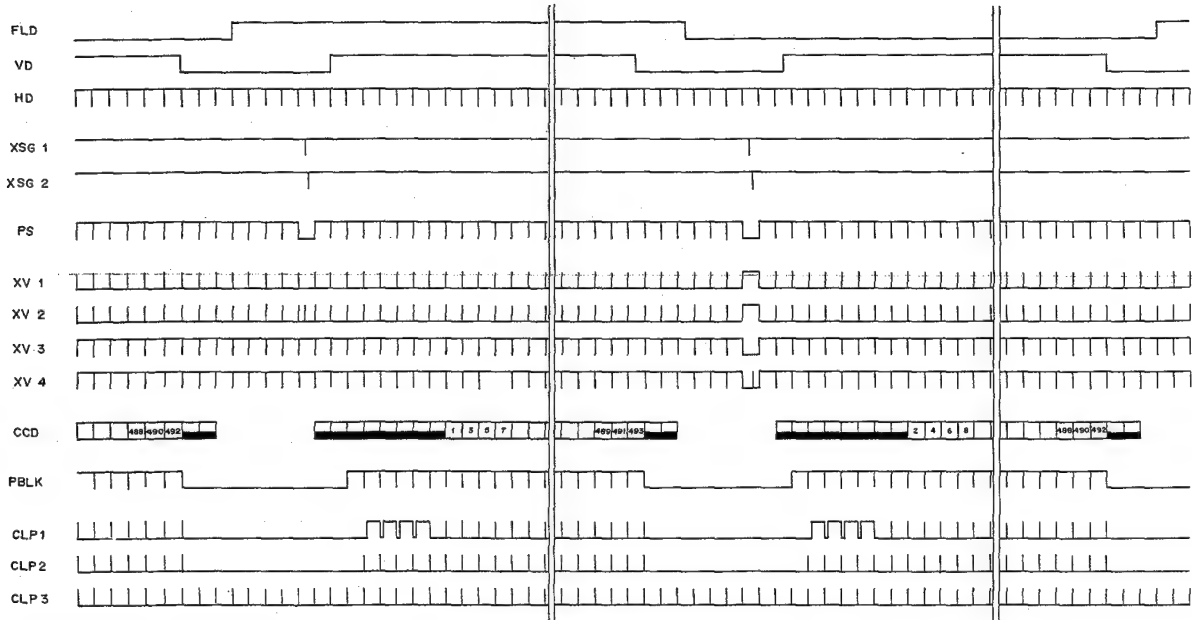
EIA(NTSC,PALM) 1-CHIP COLOR



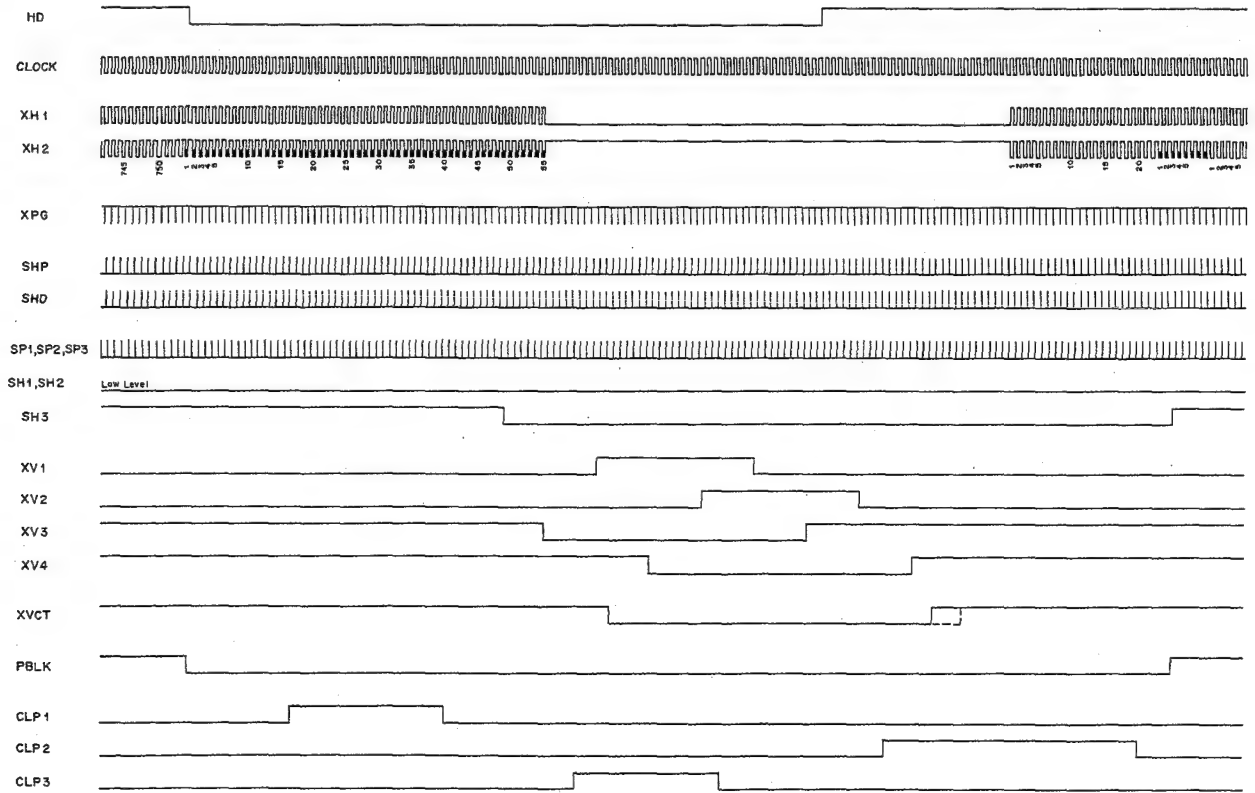
EIA(NTSC,PALM) B/W,3-CHIP COLOR



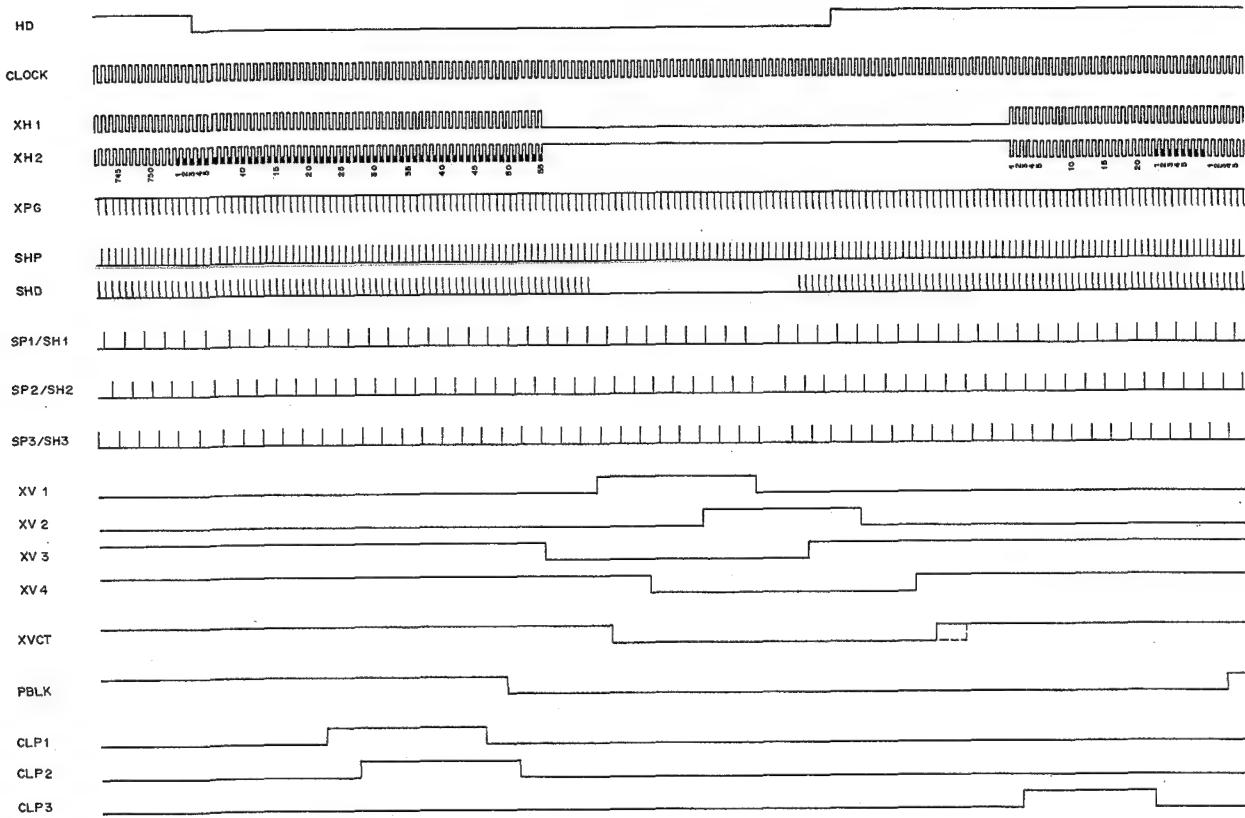
EIA(NTSC,PALM) 1-CHIP COLOR



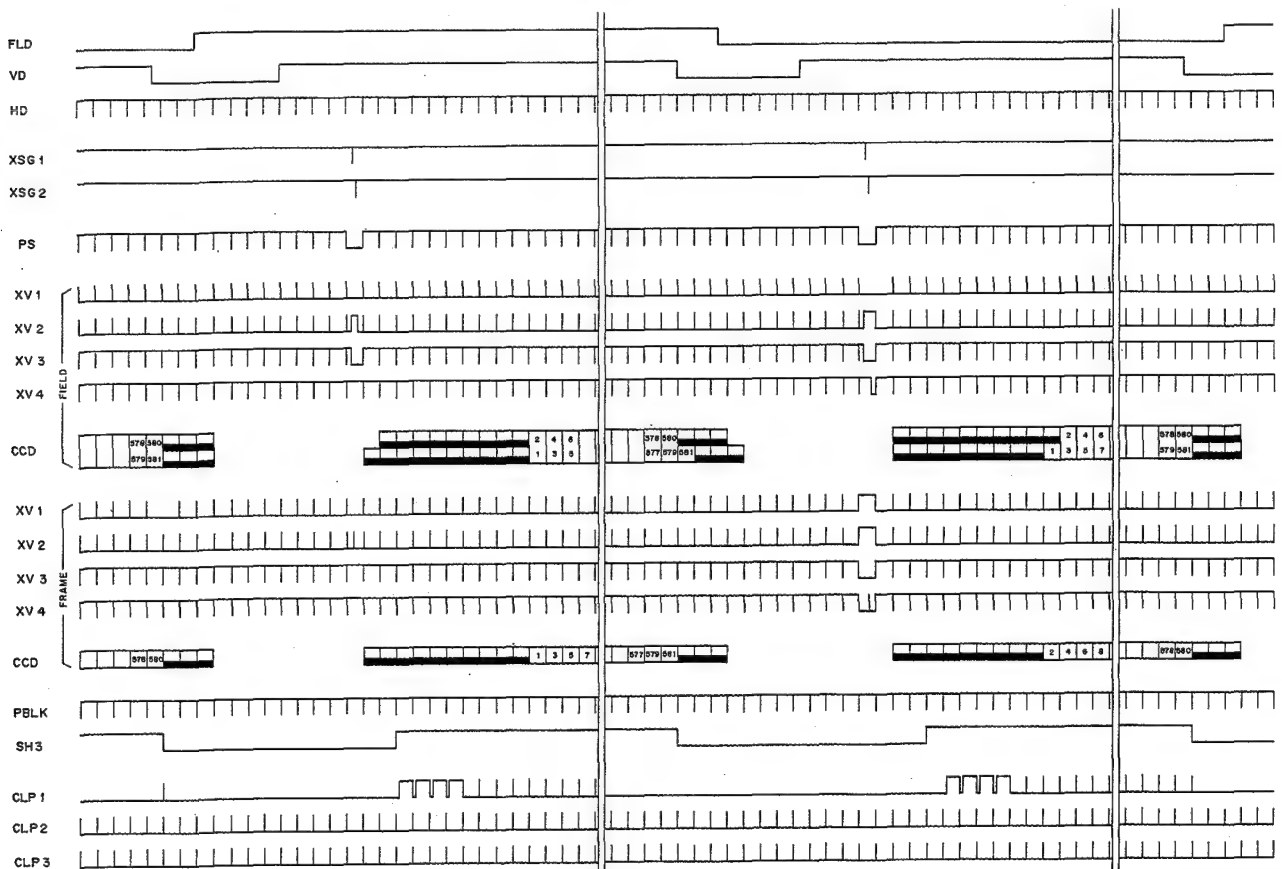
CCIR(PAL,SECAM) B/W,3CHIP COLOR

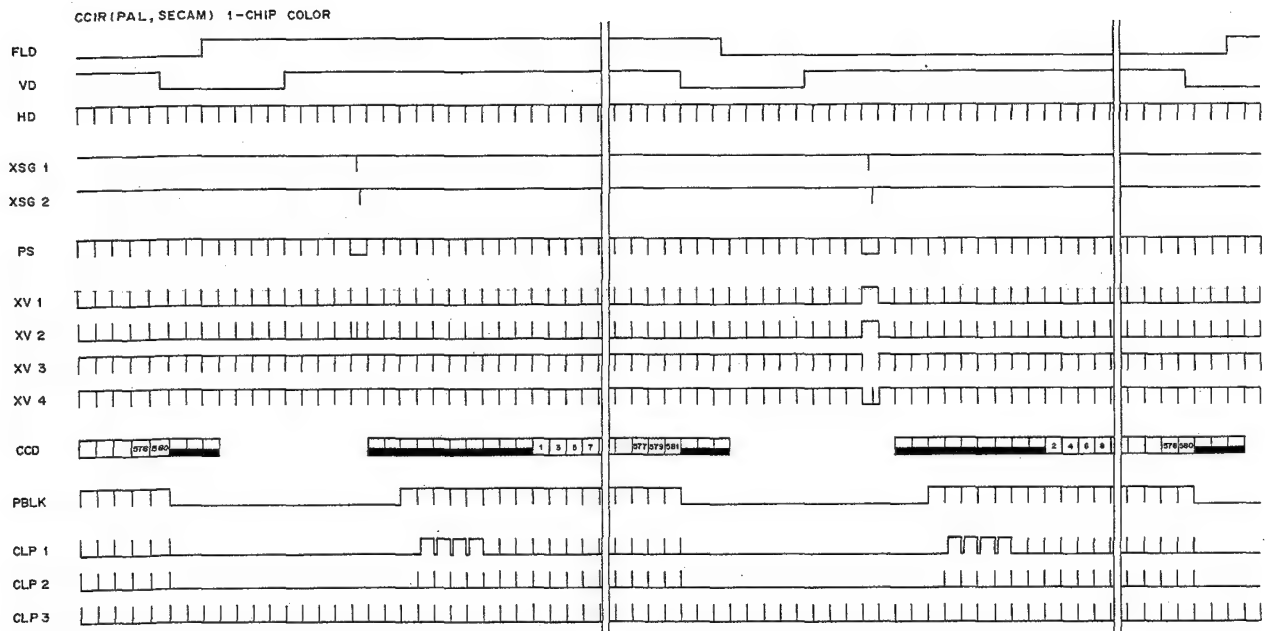


CCIR (PAL, SECAM) 1-CHIP COLOR

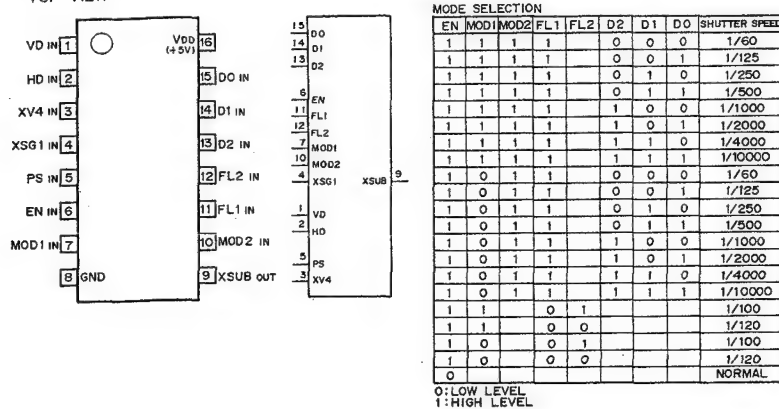


CCIR (PAL, SECAM) B/W, 3-CHIP COLOR

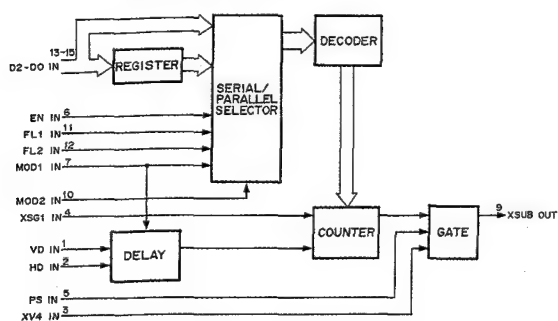




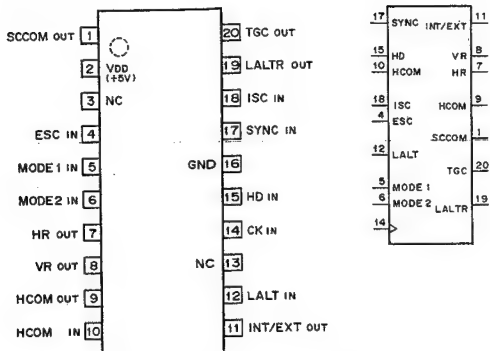
CXD1141M (SONY)

C-MOS ELECTRIC SHUTTER TIMING PULSE GENERATOR
- TOP VIEW -

D0-D3 : ESTABLISH INPUTS OF SHUTTER SPEED
 EN : ENABLE INPUT LOW: NORMAL MODE, HIGH: ELECTRONIC SHUTTER MODE
 FL1 : MODE SELECT INPUT. LOW: FLICKERLESS, HIGH: NORMAL
 FL2 : MODE SELECT INPUT. LOW: 60HZ, HIGH: 50HZ
 HD : HORIZONTAL DRIVE PULSE INPUT
 MOD1 : MODE SELECT INPUT. LOW: PAL, HIGH: NTSC
 MOD2 : MODE SELECT INPUT. LOW: SERIAL INPUT, HIGH: PARALLEL INPUT
 PS : POWER SAVE PULSE INPUT
 VD : VERTICAL DRIVE PULSE INPUT
 XSG1 : READ OUT PULSE INPUT OF SENSOR ELECTRON
 XSUB : ELECTRON SWEEP OUT PULSE INPUT
 XV4 : VERTICAL SCAN CLOCK INPUT

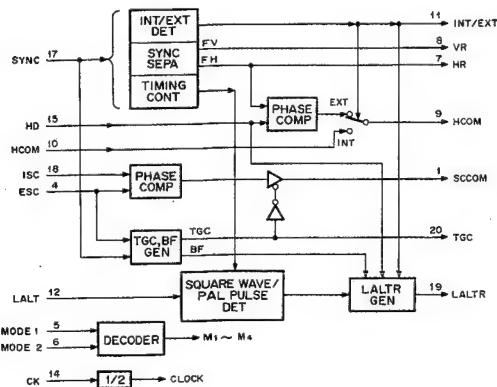


CXD1216M (SONY) FLAT PACKAGE
C-MOS GENLOCK DRIVER
- TOP VIEW -



INPUT	MODE1	MODE2	SYSTEM
0	0	M1	PAL-VBS
1	0	M2	PALM-VBS
0	1	M3	PALSECAM-VS/SC/LALT
1	1	M4	NTSC-VBS,NTSC-VS/SC PALM-VS/SC/LALT

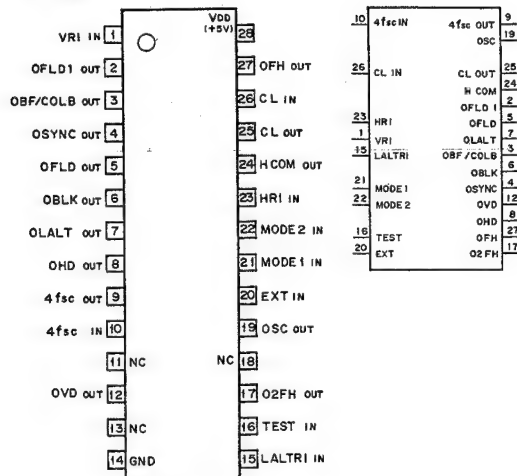
0: LOW LEVEL
1: HIGH LEVEL



INPUT
CK : 4fsc CLOCK INPUT
ESC : SC/COLOR BURST
HCOM : PHASE COMPARE FROM CXD1217
HD : H DRIVE FROM CXD1217
ISC : SUBCARRIER FROM CXD1217
LALT : LALT FROM REFERENCE SIGNAL GENERATOR
MODE1,2 : SYSTEM SELECT
SYNC : SYNC FROM REFERENCE SIGNAL GENERATOR

OUTPUT
HCOM : PHASE COMPARE HR WITH HD
HR : fh OF SYNC SEPARATE
INT/EXT : INTERNAL/EXTERNAL SPECIFIED
LALTR : LINE CHANGE RESET
SCCOM : PHASE COMPARE ESC WITH ISC
TGC : TRISTATE CONTROL
VR : fv OF SYNC SEPARATE

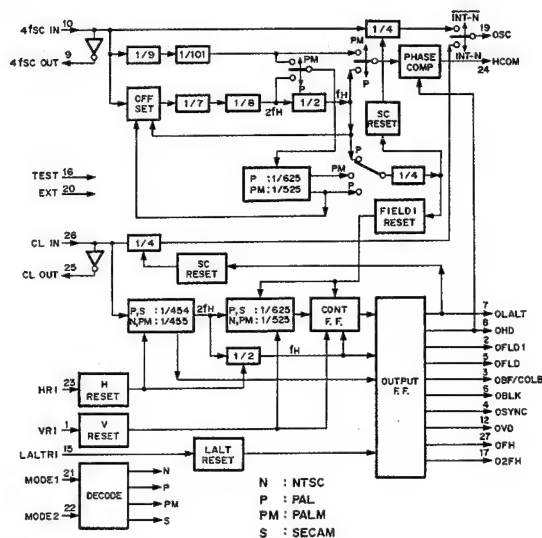
CXD1217M (SONY) FLAT PACKAGE
C-MOS SYNC GENERATOR
- TOP VIEW -



SYSTEM	4fsc	CLOCK
NTSC	910Hz	910Hz
PAL	1135Hz+2V	908Hz
PALM	909Hz	910Hz
SECAM	—	908Hz

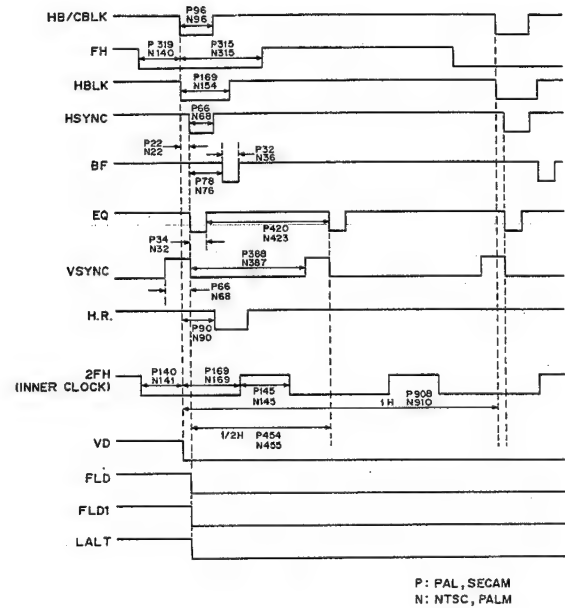
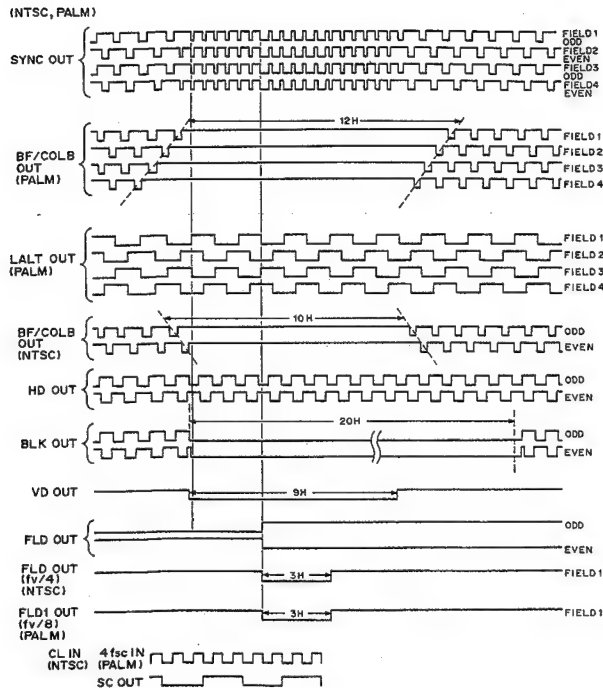
INPUT	MODE1	MODE2	SYSTEM
0	0	0	NTSC
0	1	0	SECAM
1	0	0	PALM
1	1	1	PAL

0: LOW LEVEL
1: HIGH LEVEL

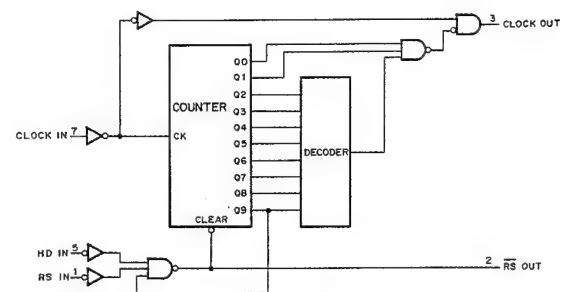
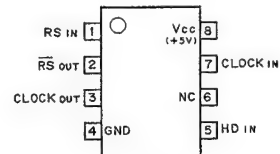


INPUT
4fsc IN : 4fsc INPUT
CL IN : CLOCK INPUT
EXT : SYNC MODE SELECT
(L: INTERNAL/H: EXTERNAL)
HR1 : H RESET
LALTRI : LINE CHANGE RESET
MODE1,2 : SYSTEM SELECT
VR1 : V RESET

OUTPUT
4fsc OUT : 4fsc OUTPUT
CL OUT : CLOCK OUTPUT
HCOM : PHASE COMPARE
O2FH : 2FH OUTPUT
OBF/COLB : BURST FLAG/COLOR BLANKING
OBLK : COMPOSITE BLANKING
OFH : H FREQUENCY
OFLD1 : EVEN, ODD
OFLD : FIELD1
OHD : H DRIVE
OLALT : LINE CHANGE
OSC : SUBCARRIER
OSYNC : COMPOSITE SYNC
OVD : V DRIVE

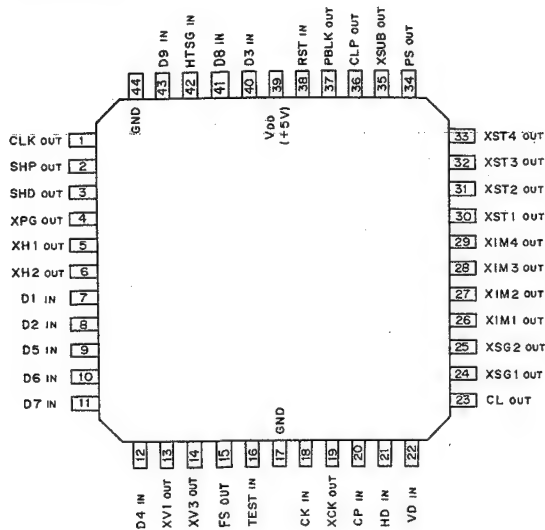


CXD1361M (TI) FLAT PACKAGE
CLOCK CONTROLLER
- TOP VIEW -



CXD8002 (SONY)

CMOS TIMING PULSE GENERATOR FOR CCD - TOP VIEW -



MODE SELECT

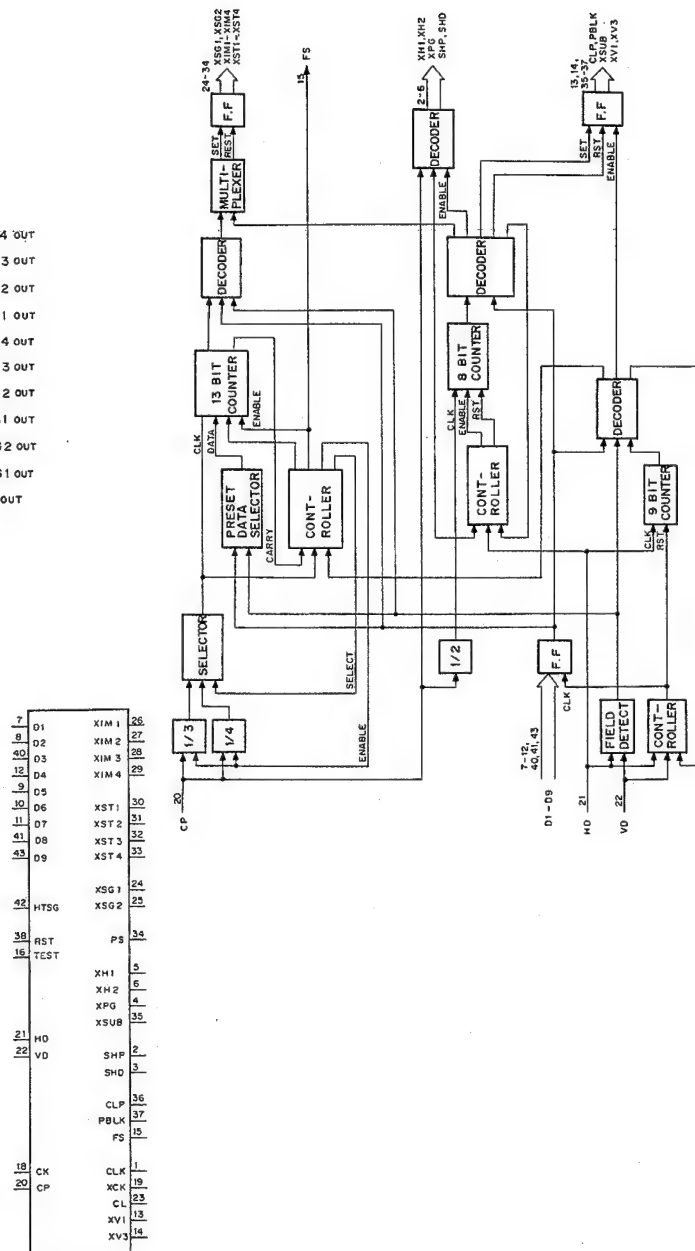
	LOW LEVEL	HIGH LEVEL
D1	CCIR	EIA
D2	FRAME	FIELD

SHUTTER SPEED SELECT

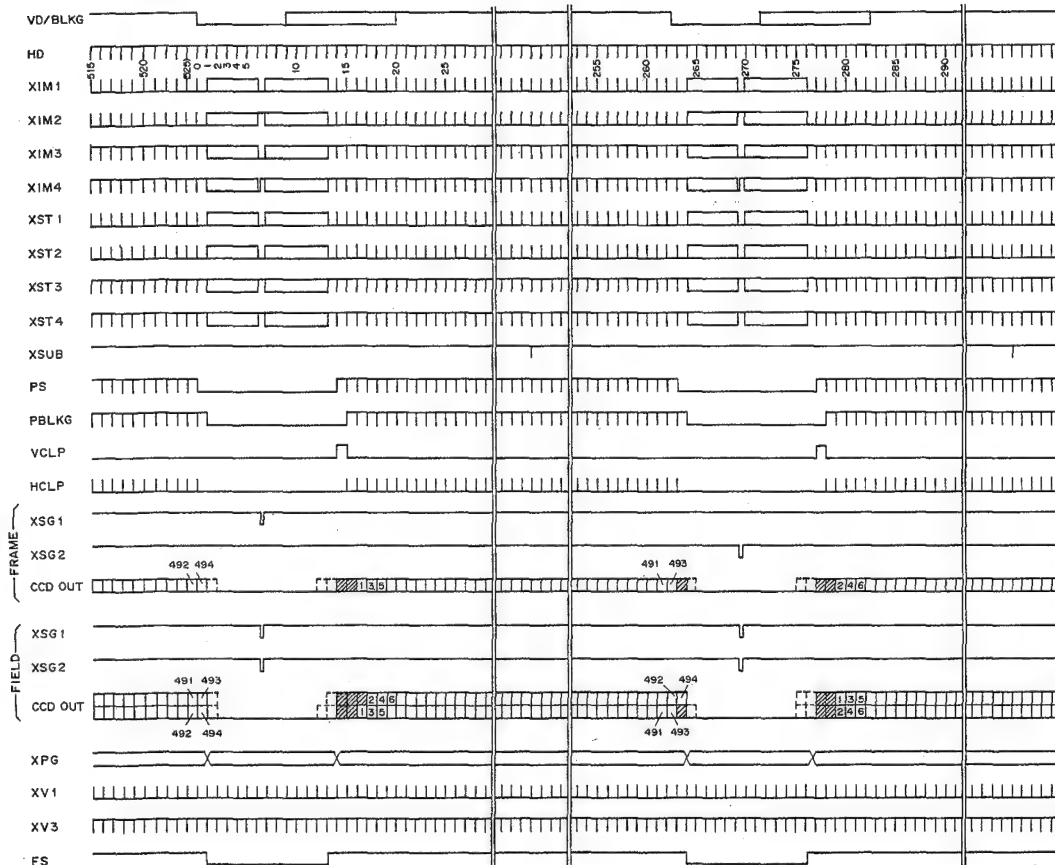
D4	D5	D6	D7	SHUTTER SPEED (sec)
0	0	0	1	OFF
0	0	1	1	1/125
0	1	0	1	1/250
0	1	1	1	1/500
1	0	0	1	1/1000
1	0	1	1	1/2000
1	1	0	1	1/4000
1	1	1	1	1/10000
X	X	X	0	1/100 (EIA) 1/60 (CCIR)

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

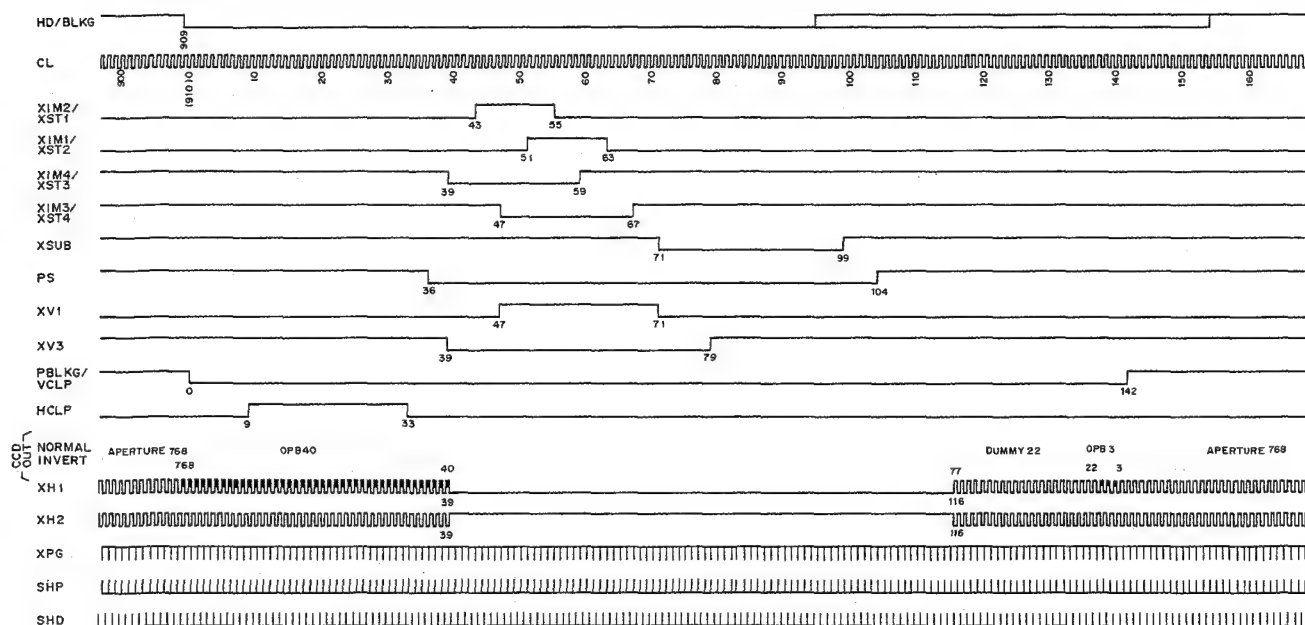
CK : CLOCK INPUTS
XCK : INVERTED CLOCK OUTPUT
CLK, CL : CLOCK OUTPUTS
HD : HORIZONTAL DRIVE INPUT
VD : VERTICAL DRIVE INPUT
XSG1, XSG2 : CLOCK OUTPUTS FOR READ OUT FROM IMAGE SENSOR
XIM1 - XIM4 : CLOCK OUTPUTS FOR IMAGE REGISTER DRIVE OF CCD
XST1 - XST4 : CLOCK OUTPUTS FOR STORAGE REGISTER DRIVE OF CCD
PS : VERTICAL DRIVER POWER SAVE PULSE OUTPUT
XH1, XH2 : HORIZONTAL REGISTER TRANSMISSION CLOCK OUTPUTS
XPG : PRE-CHARGE GATE PULSE OUTPUT
XSUB : ELECTRIC CHARGE DISCHARGING PULSE OUTPUT
SHP : PRE-CHARGE LEVEL SAMPLE & HOLD PULSE OUTPUT
SHD : DATA LEVEL SAMPLE & HOLD PULSE OUTPUT
CLP : CLAMP PULSE OUTPUT
PBLK : PRE-BLANKING PULSE OUTPUT
FS : FLAG
XV1, XV3 : CLOCK OUTPUTS FOR INTERFACE
HTSG : READ OUT STOP SIGNAL INPUT
RST, TEST : TEST MODE SIGNAL INPUTS
D1 - D3, D8, D9 : MODE SELECT SIGNAL INPUTS
D4 - D7 : SHUTTER SPEED MODE SIGNAL INPUTS



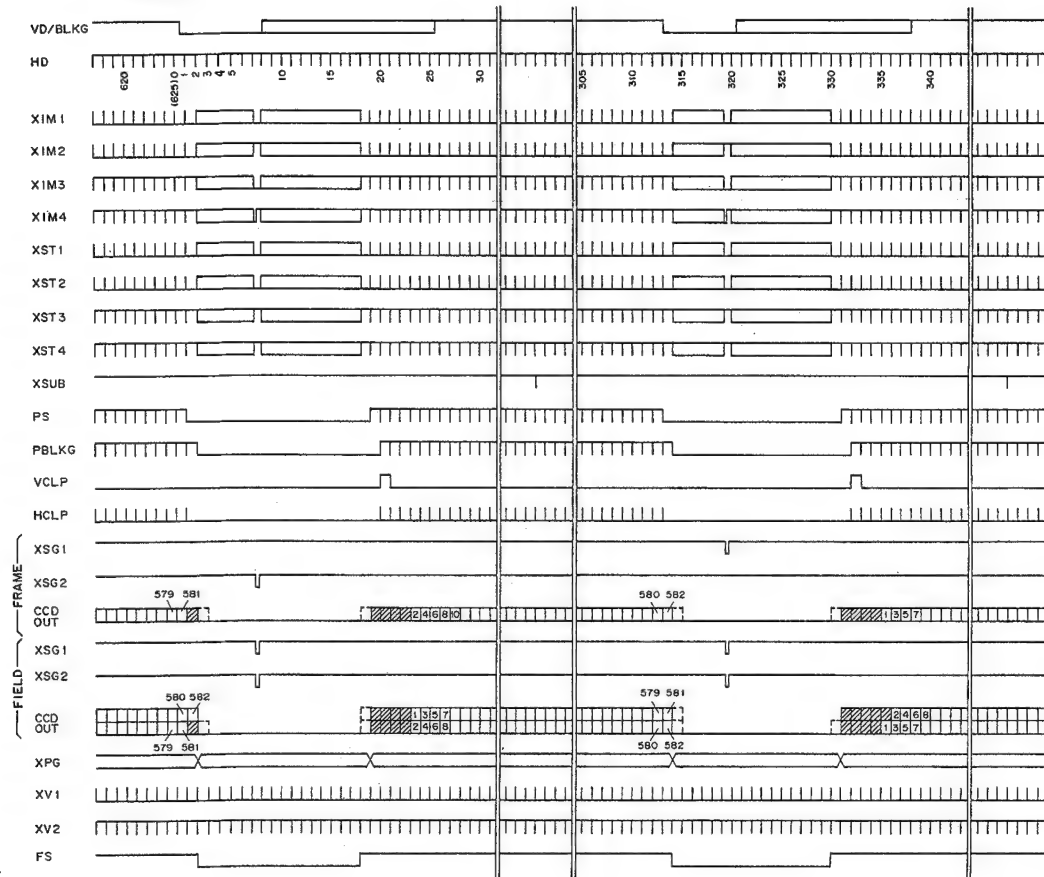
EIA (V BLANKING)



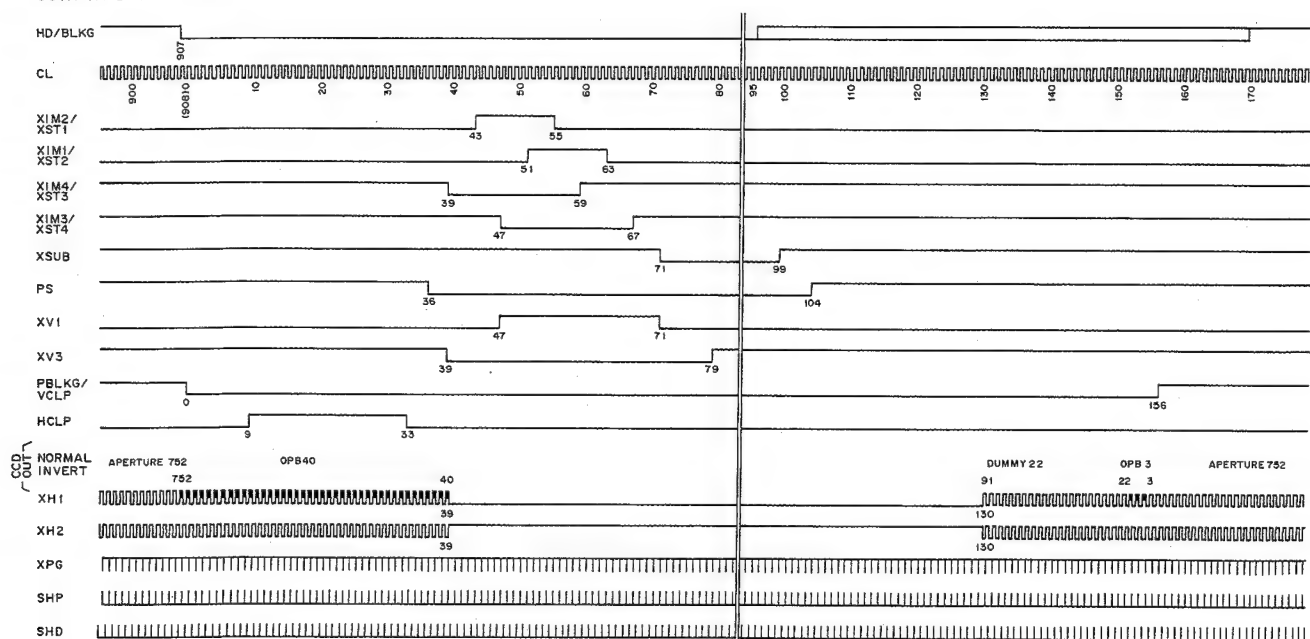
EIA (H BLANKING)



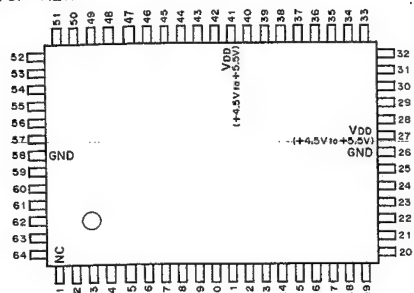
CCIR (V BLANKING)



CCIR (H BLANKING)

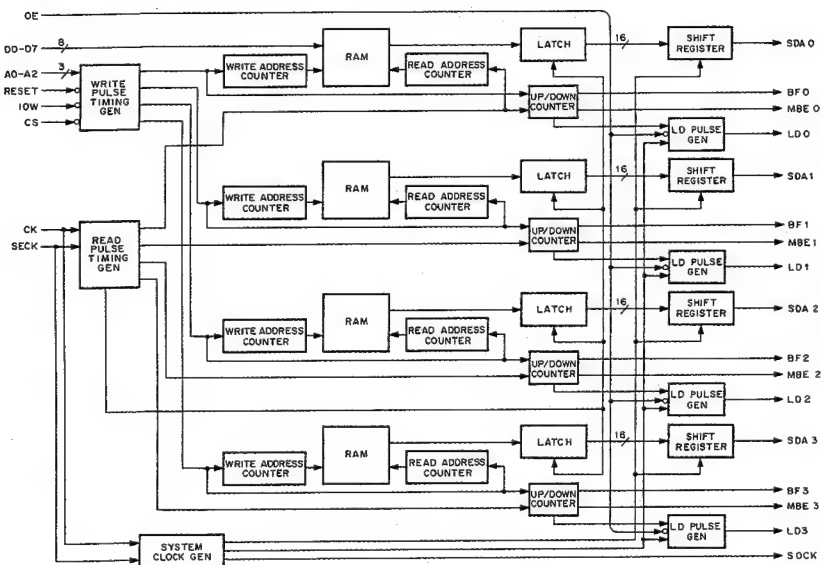
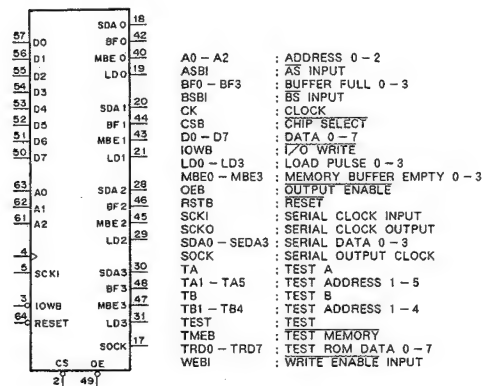


CXD8071Q (SONY) FLAT PACKAGE
C-MOS PARALLEL TO SERIAL CONVERTER
- TOP VIEW -

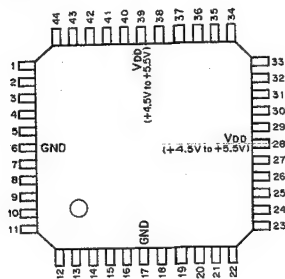


(V_{DD} = +4.5V to +5.5V)

PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL
1	—	NC	17	O	SOCK	33	O	TRD1	49	I	OEB
2	I	CSB	18	O	SDAO	34	O	TRD2	50	I	D7
3	I	IOWB	19	O	LDO	35	O	TRD3	51	I	D6
4	I	CK	20	O	SDA1	36	O	TRD4	52	I	D5
5	I	SCKI	21	O	LD1	37	O	TRD5	53	I	D4
6	O	SCKO	22	I	TB1	38	O	TRD6	54	I	D3
7	I	TA	23	I	TB2	39	O	TRD7	55	I	D2
8	I	TB	24	I	TB3	40	O	MBE0	56	I	D1
9	I	TEST	25	I	TB4	41	—	V _{DD}	57	I	D0
10	I	TA1	26	—	GND	42	O	BF0	58	—	GND
11	I	TA2	27	—	V _{DD}	43	O	MBE1	59	I	WEBI
12	I	TA3	28	O	SDA2	44	O	BF1	60	I	TA5
13	I	TA4	29	O	LD2	45	O	MBE2	61	I	A2
14	I	ASBI	30	O	SDA3	46	O	BF2	62	I	A1
15	I	TMEB	31	O	LD3	47	O	MBE3	63	I	A0
16	I	BSBI	32	O	TRD0	48	O	BF3	64	I	RSTB

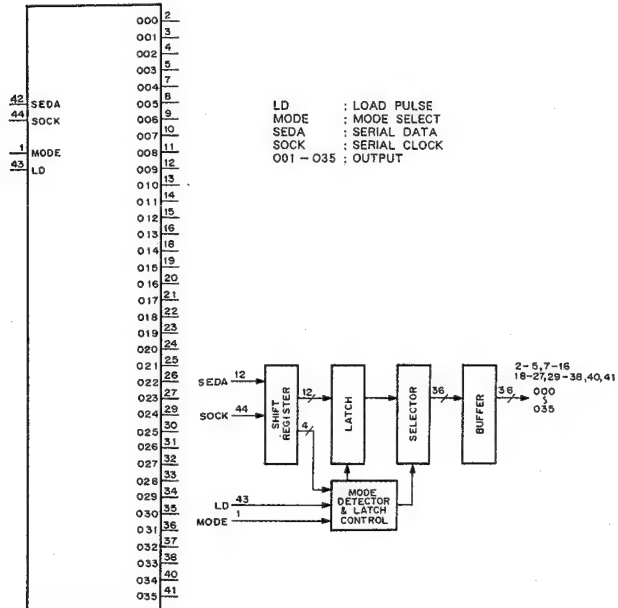


CXD8072Q (SONY) FLAT PACKAGE
C-MOS SERIAL TO PARALLEL CONVERTER
- TOP VIEW -

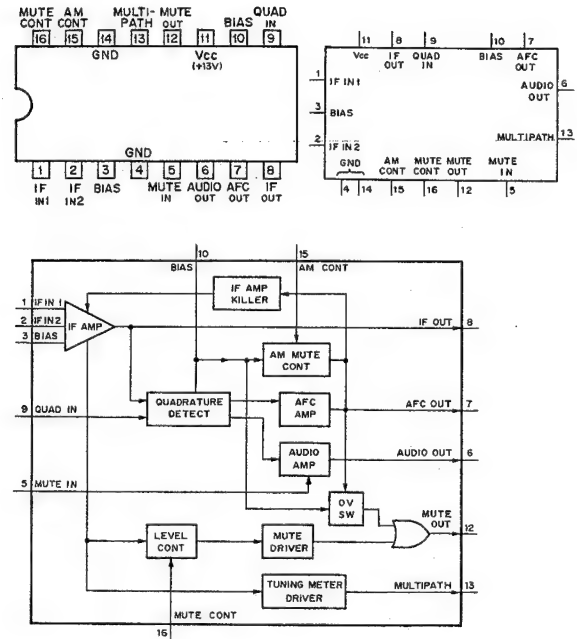


(V_{DD} = +4.5V to +5.5V)

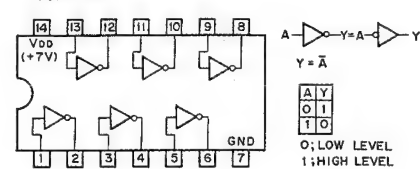
PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL
1	I	MODE	12	O	O09	23	O	O19	34	O	O29
2	O	O00	13	O	O10	24	O	O20	35	O	O30
3	O	O01	14	O	O11	25	O	O21	36	O	O31
4	O	O02	15	O	O12	26	O	O22	37	O	O32
5	O	O03	16	O	O13	27	O	O23	38	O	O33
6	-	GND	17	-	GND	28	-	V _{DD}	39	-	V _{DD}
7	O	O04	18	O	O14	29	O	O24	40	O	O34
8	O	O05	19	O	O15	30	O	O25	41	O	O35
9	O	O06	20	O	O16	31	O	O26	42	I	SEDA
10	O	O07	21	O	O17	32	O	O27	43	I	LD
11	O	O08	22	O	O18	33	O	O28	44	I	SOCK



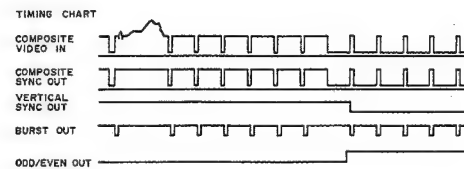
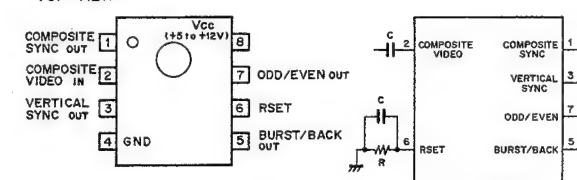
HA12412 (HITACHI)
FM IF SYSTEM
- TOP VIEW -



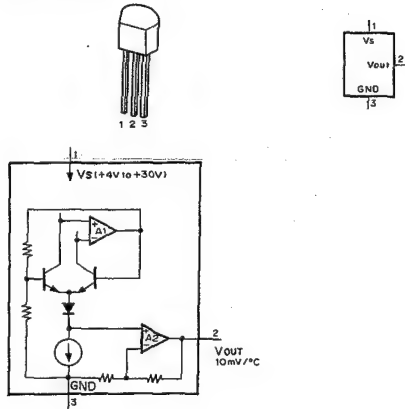
HD74AC04P-R (HITACHI)
C-MOS INVERTER
- TOP VIEW -



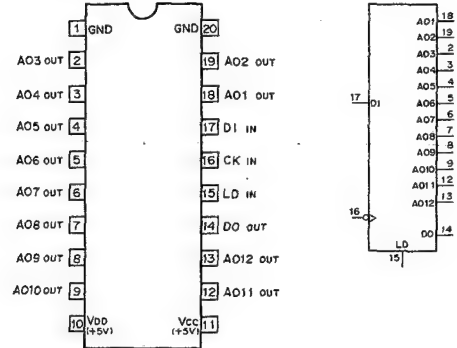
LM1881N (NS)
VIDEO SYNC SEPARATOR
- TOP VIEW -



LM35DZ (NATIONAL)
BIPOLAR TEMPERATURE SENSOR

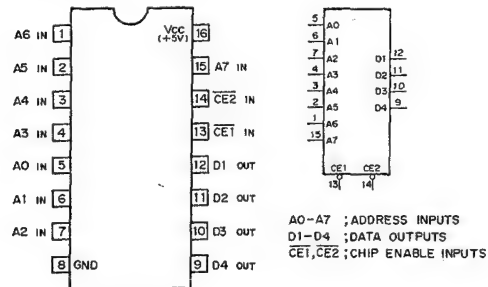


MB88341PF (FUJITSU) FLAT PACKAGE
CMOS 8-BIT D/A CONVERTER
- TOP VIEW -

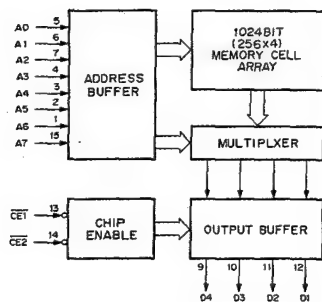
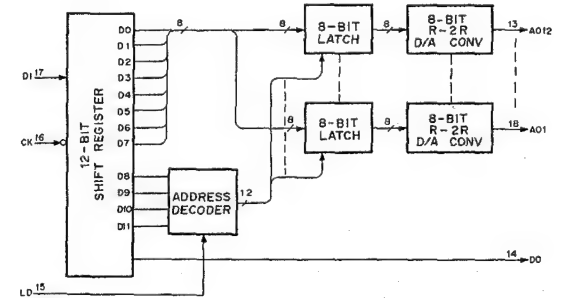


AO1 - AO12 : 8-BIT D/A OUTPUTS
CK : CLOCK INPUT
DI : SERIAL DATA INPUT
DO : DATA OUTPUT
LD : DATA LOAD CONTROL INPUT (H: LOAD)

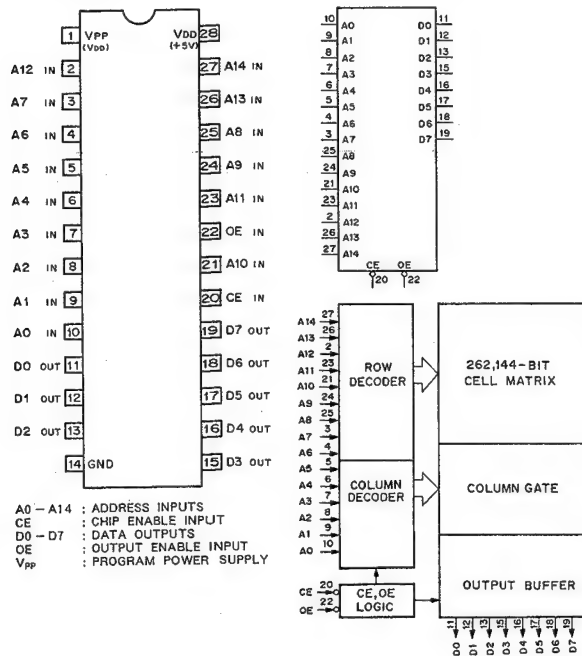
MB7114LPF (FUJITSU) (ACCESS TIME = 50ns) FLAT PACKAGE
1024-BIT (256x4) PROM
- TOP VIEW -



A0-A7 : ADDRESS INPUTS
D1-D4 : DATA OUTPUTS
CE1, CE2 : CHIP ENABLE INPUTS



MBM27C256A-25 (FUJITSU) (ACCESS TIME = 250ns)

C-MOS 256K(32Kx8)-BIT UV ERASABLE PROM WITH 3-STATE OUTPUTS
- TOP VIEW -

An	CE	OE	VDD	VPP	Dn	FUNCTION
An	0	0	+5V	+5V	DOUT	READ
An	0	1	+5V	+5V	HI-Z	OUTPUT DISABLE
X	1	X	+5V	+5V	HI-Z	STANDBY
An	0	1	+6V	+12.5V	DIN	PGM
An	1	0	+6V	+12.5V	DOUT	PGM VERIFY(1)
An	0	0	+6V	+12.5V	DOUT	PGM VERIFY(2)
X	1	1	+6V	+12.5V	HI-Z	PGM INH
A0	0	0	+5V	+5V	DEVICE CODE	ELECTRONIC SIGNATURE*

*SEE FOLLOWING DESCRIPTION.

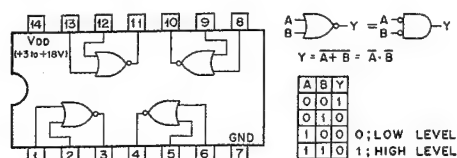
ELECTRONIC SIGNATURE FOR P ROM WRITER

ADDRESS SETTINGS IN READ MODE

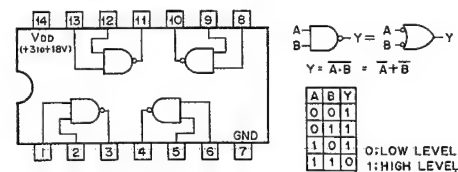
A1-A8 A9 A10-A13 A14,Vpp

0 12V 0 1

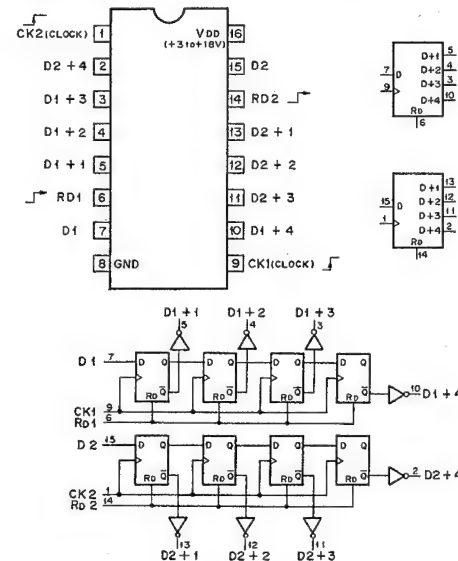
	A0	D7	D6	D5	D4	D3	D2	D1	D0
MAKER CODE	0	0	0	0	0	0	1	0	0
DEVICE CODE	1	0	1	1	0	0	0	1	0

MC14001BCP (MOTOROLA)
MC14001BF (MOTOROLA) FLAT PACKAGE
TC4001BP (TOSHIBA)C-MOS 2-INPUT NOR GATE
- TOP VIEW -

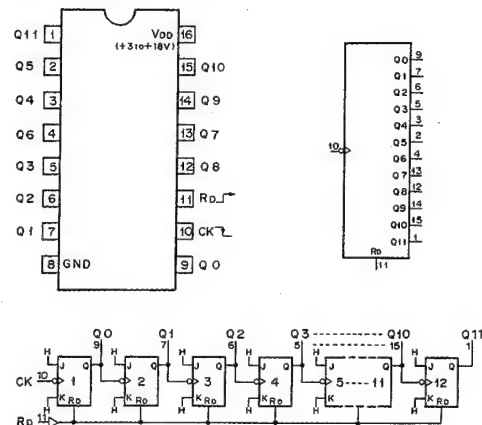
MC14011BF (MOTOROLA) FLAT PACKAGE

C-MOS 2-INPUT NAND GATE
- TOP VIEW -

MC14015BF (MOTOROLA) FLAT PACKAGE

C-MOS DUAL 4-STAGE STATIC SHIFT REGISTER WITH DIRECT RESET
- TOP VIEW -

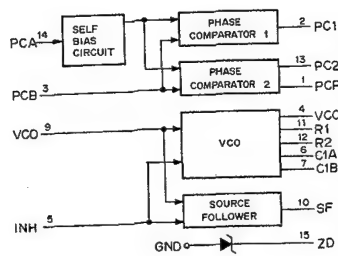
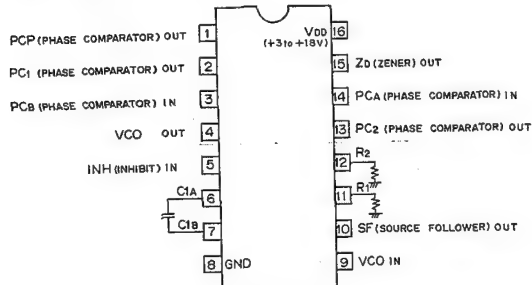
MC14040BF (MOTOROLA) FLAT PACKAGE

C-MOS 12-STAGE RIPPLE CARRY BINARY COUNTER/DRIVER
- TOP VIEW -

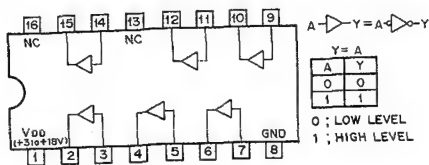
COUNT	Q11	Q10	Q9	Q8	Q7	Q6	Q5	Q4	Q3	Q2	Q1	Q0	RD	Q11	Q0
0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4095	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1

0: LOW LEVEL
1: HIGH LEVEL

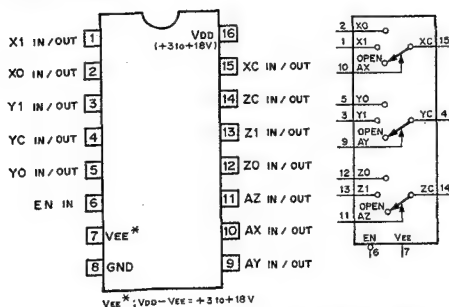
MC14046BF (MOTOROLA) FLAT PACKAGE
C-MOS PHASE LOCKED LOOP
- TOP VIEW -



MC14050BF (MOTOROLA) FLAT PACKAGE
C-MOS NON-INVERTING TYPE BUFFER/CONVERTER
- TOP VIEW -

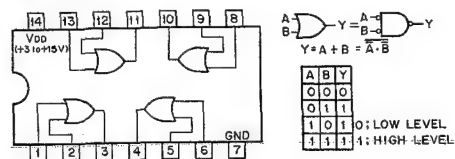


MC14053BF (MOTOROLA) FLAT PACKAGE
C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
- TOP VIEW -

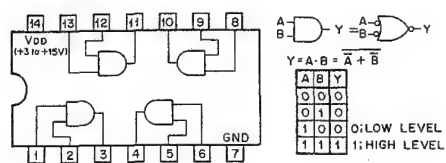


0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

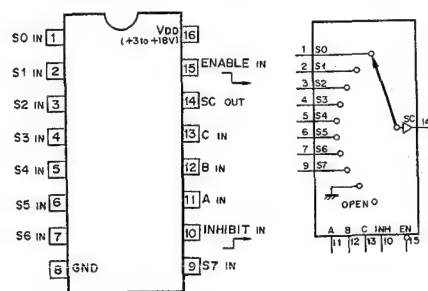
MC14071BF (MOTOROLA) FLAT PACKAGE
C-MOS 2-INPUT OR GATE
- TOP VIEW -



MC14081BF (MOTOROLA) FLAT PACKAGE
C-MOS 2-INPUT AND GATE
- TOP VIEW -



MC14512BF (MOTOROLA) FLAT PACKAGE
C-MOS 8-CHANNEL DATA SELECTOR/MULTIPLEXER
- TOP VIEW -

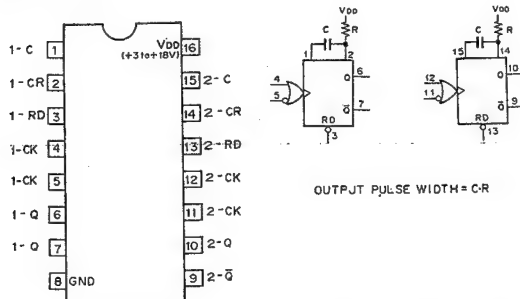


CONTROL INPUTS					OUTPUT
EN	INH	C	B	A	SC
0	0	0	0	0	S0
0	0	0	0	1	S1
0	0	0	1	0	S2
0	0	0	1	1	S3
0	0	1	0	0	S4
0	0	1	0	1	S5
0	0	1	1	0	S6
0	0	1	1	1	S7
0	1	X	X	X	GND
1	X	X	X	X	OPEN

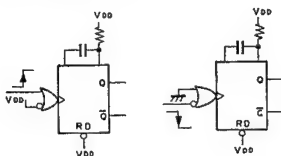
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

3

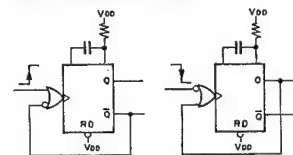
MC14538BF (MOTOROLA) FLAT PACKAGE
C-MOS DUAL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
- TOP VIEW -



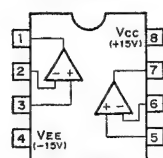
RETRIGGERABLE M.M.V



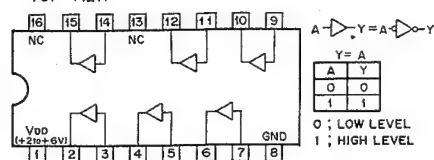
NON-RETRIGGERABLE M.M.V



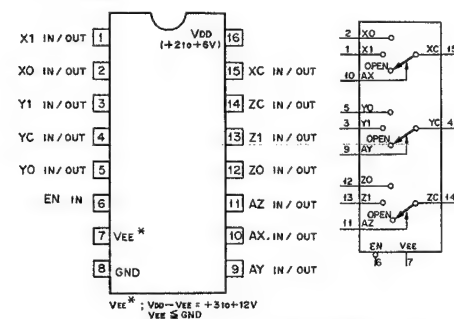
MC34182M (MOTOROLA) FLAT PACKAGE
JFET INPUT OPERATIONAL AMPLIFIER
- TOP VIEW -



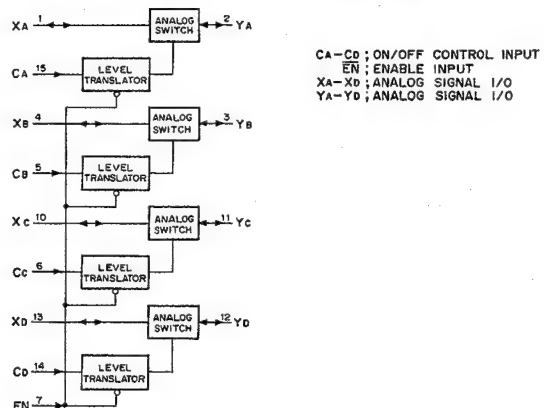
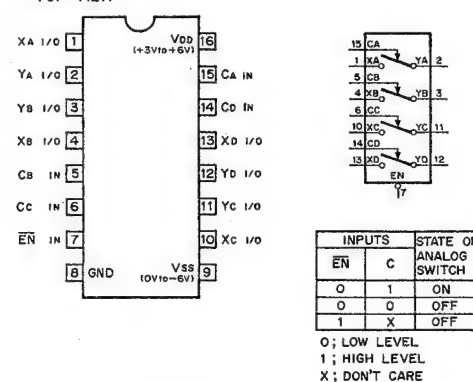
MC74HC4050F (MOTOROLA) FLAT PACKAGE
C-MOS NON-INVERTING TYPE BUFFER/CONVERTER
- TOP VIEW -



MC74HC4053F (MOTOROLA) FLAT PACKAGE
C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
- TOP VIEW -

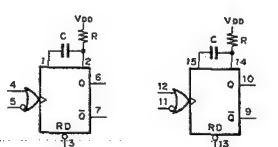
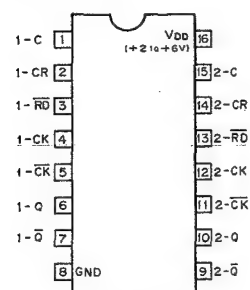
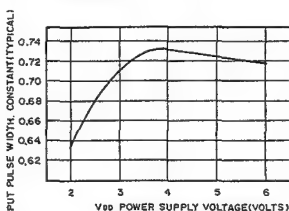


MC74HC4316F (MOTOROLA) FLAT PACKAGE
C-MOS QUAD ANALOG SWITCH
- TOP VIEW -

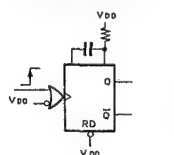


MC74HC4538F (MOTOROLA) FLAT PACKAGE

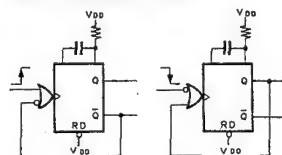
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
- TOP VIEW -


$$\text{OUTPUT PULSE WIDTH} = k \cdot C \cdot R$$


RETRIGGERABLE M.M.V.

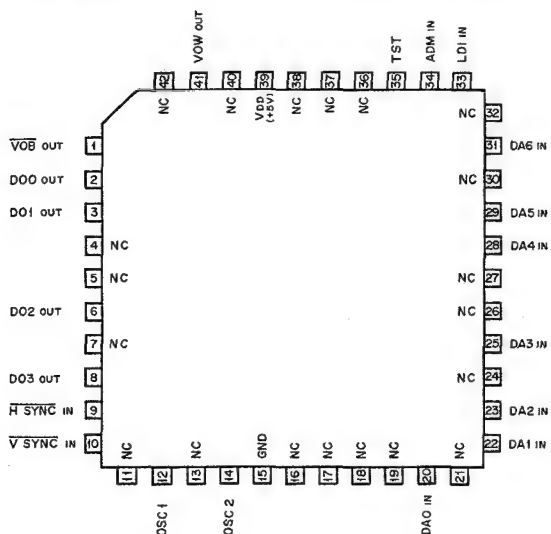


NON-RETRIGGERABLE M.M.V.

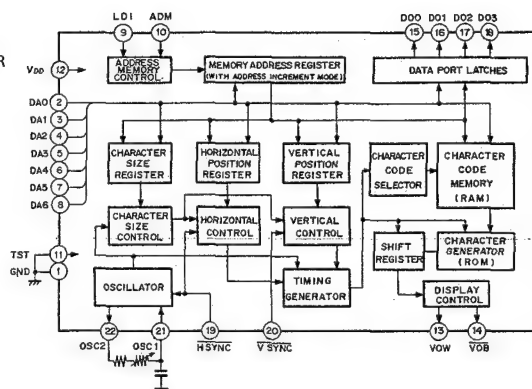


MN1237A (MATSUSHITA) FLAT PACKAGE

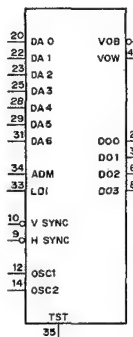
C-MOS INDICATES DATA OF 60 CHARACTERS CRT INTERFACE
- TOP VIEW -



ADM	:	ADDRESS MODE SELECT IN
DA0~DA6	:	DATA BUS INPUT
DO0~DO3	:	GENERAL OUTPUT
H SYNC	:	H SYNC INPUT
V SYNC	:	V SYNC INPUT
LDI	:	STROBE PULSE INPUT
OSC 1,2	:	OSC
TST	:	TEST
VOB	:	BACKGROUND OUTPUT
VOW	:	CHARACTERS OUTPUT

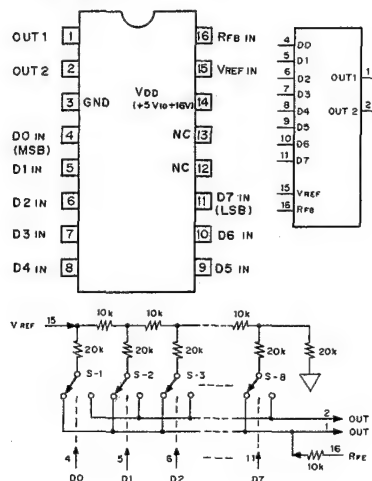


D3	D2	D1	D0	D3D2D1D0
0	0	0	0	A N 0
0	0	0	1	B O 1
0	0	1	0	C P 2
0	0	1	1	D Q 3
0	1	0	0	E R 4
0	1	0	1	F S 5
0	1	1	0	G T 6
0	1	1	1	H U 7
1	0	0	0	I V 8
1	0	0	1	J W 9
1	0	1	0	K X
1	0	1	1	L Y
1	1	0	0	M Z
1	1	0	1	
1	1	1	0	
1	1	1	1	

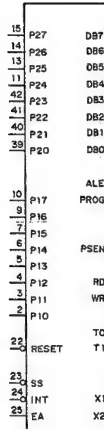
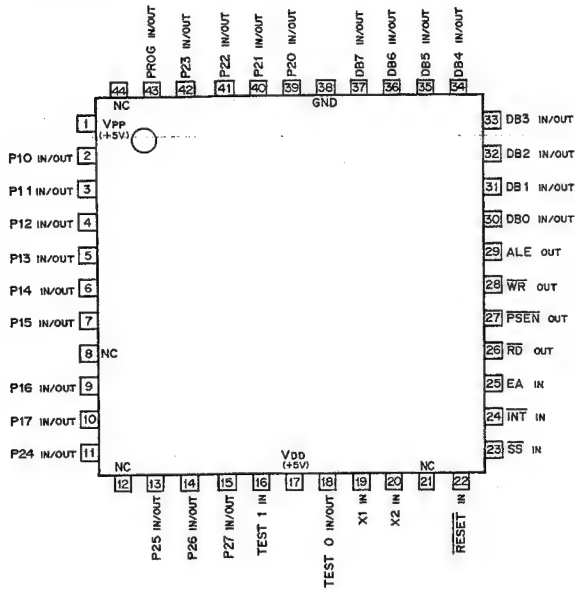


MP7523SOP (MICRO POWER SYSTEMS) FLAT PACKAGE

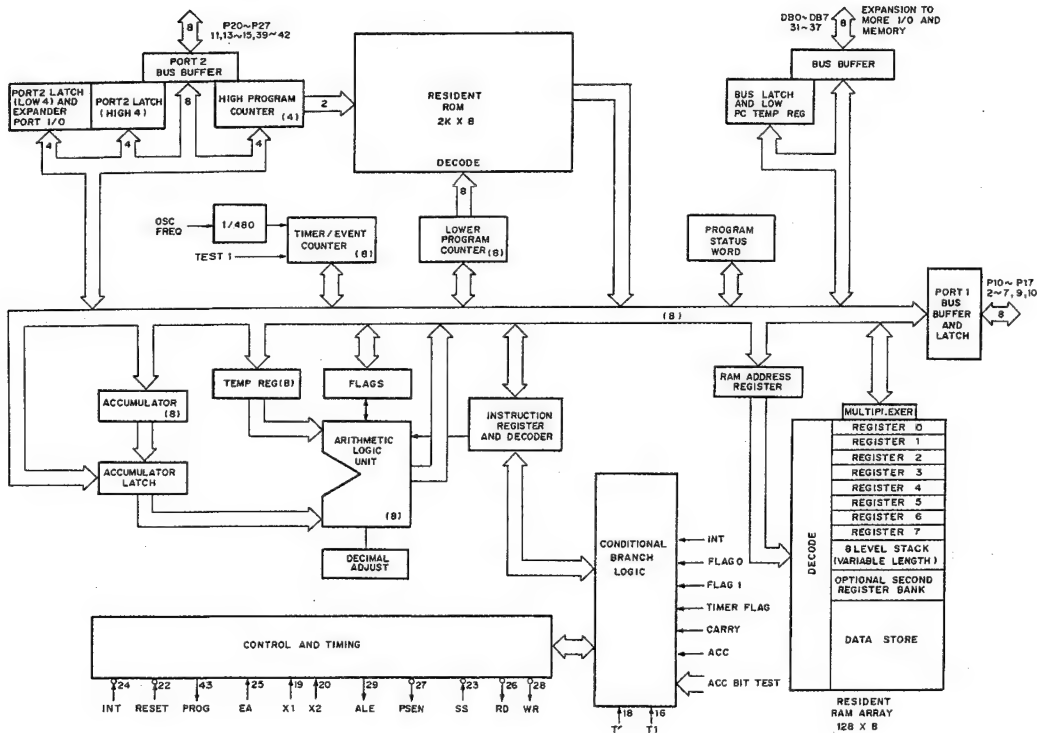
C-MOS 8-BIT D/A CONVERTER
- TOP VIEW -

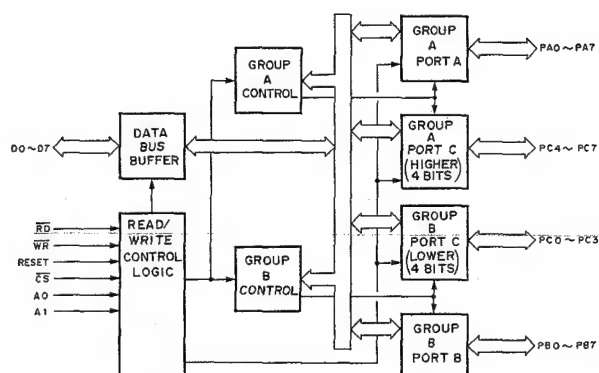
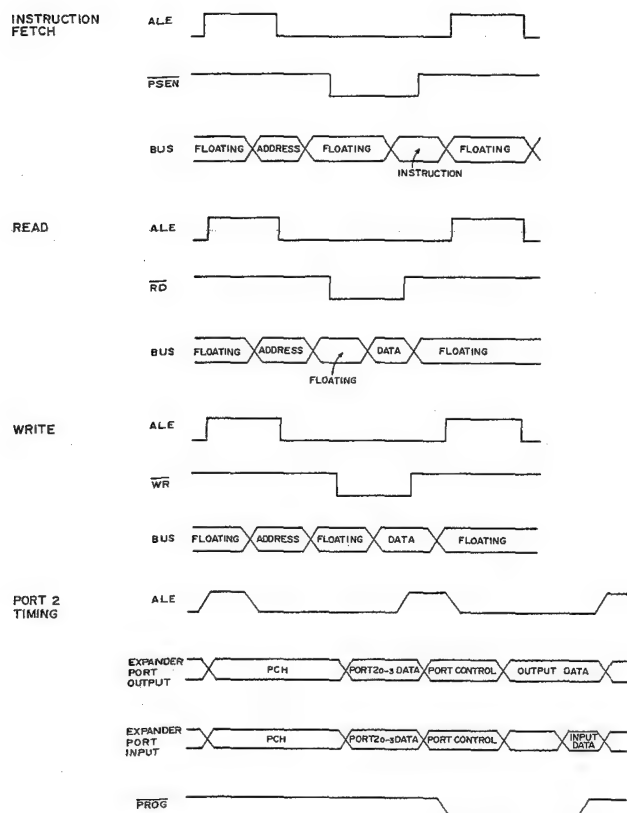


MSM80C49GS (OKI) FLAT PACKAGE
C-MOS 8-BIT MICROPROCESSOR
- TOP VIEW -

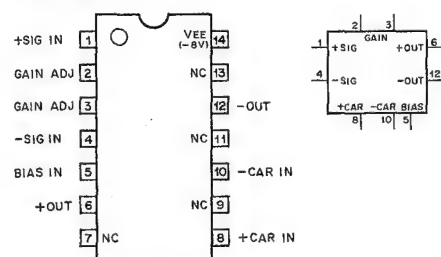


ALE : ADDRESS LATCH ENABLE
DB0-7 : DATA BUS
EA : EXTERNAL ACCESS
INT : INTERRUPT
P20-27 : I/O PORT 2
P10-17 : I/O PORT 1
PROG : PROGRAM PULSE
PSEN : PROGRAM STORE ENABLE
RD : READ
RESET : INITIALIZING IN
SS : SINGLE STEP
TO : TEST 0 I/O
T1 : TEST 1 IN
Vcc : +5V
Vdd : +5V FOR INTERNAL DATA MEMORY
WR : WRITE
X1,X2 : CRYSTAL OSC

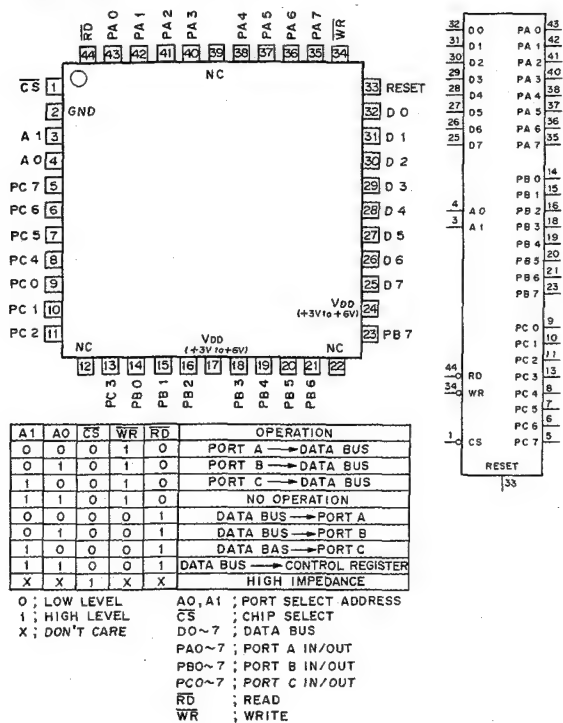




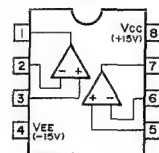
RC1496M (RAYTHEON) FLAT PACKAGE
BALANCED MODULATOR/DEMULATOR
- TOP VIEW -



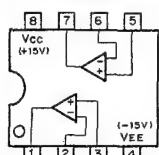
MSM82C55A-5GS (OKI) FLAT PACKAGE
C-MOS PROGRAMMABLE PERIPHERAL INTERFACE
- TOP VIEW -



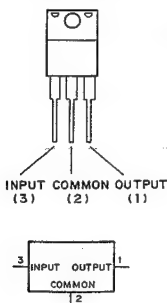
RC4556MA (RAYTHEON) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(WIDE BAND, DECOMPENSATED)
- TOP VIEW -



RC4558M (RAYTHEON) FLAT PACKAGE
OPERATIONAL AMPLIFIER
- TOP VIEW -

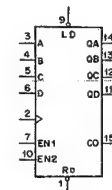
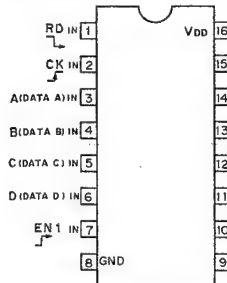


RC78 7 2FA (RAYTHEON)
POSITIVE VOLTAGE REGULATOR
- FRONT VIEW -



OUTPUT VOLTAGE	NJM78M??FA	NJM78??FA	RC78M??FA	RC78??FA
+5V	NJM78M05FA	NJM7805FA	RC78M05FA	RC7805FA
+6V	NJM78M06FA	NJM7806FA	RC78M06FA	RC7806FA
+8V	NJM78M08FA	NJM7808FA	RC78M08FA	RC7808FA
+9V	NJM78M09FA	NJM7809FA	RC78M09FA	RC7809FA
+12V	NJM78M12FA	NJM7812FA	RC78M12FA	RC7812FA
+15V	NJM78M15FA	NJM7815FA	RC78M15FA	RC7815FA
+18V	NJM78M18FA	NJM7818FA	RC78M18FA	RC7818FA
+20V	NJM78M20FA	NJM7820FA	RC78M20FA	RC7820FA
+24V	NJM78M24FA	NJM7824FA	RC78M24FA	RC7824FA

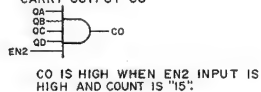
SN74HC163NS (TI) ($V_{DD} = +2$ to $+6V$) FLAT PACKAGE
C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
- TOP VIEW -



MODE SELECTION

CONTROL	LD	EN1	EN2	MODE
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

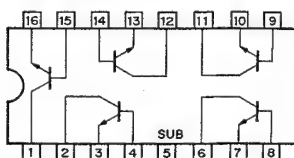
CARRY OUTPUT "CO"



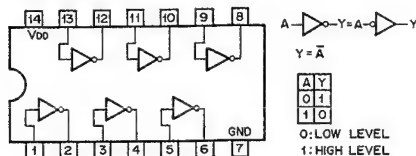
COUNT SEQUENCE

COUNT	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

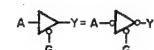
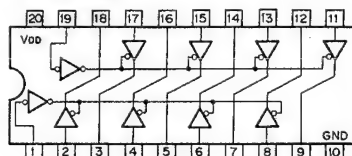
SL3127C (PLESSEY)
HIGH FREQUENCY TRANSISTOR ARRAY
- TOP VIEW -



SN74HC04NS (TI) ($V_{DD} = +2$ to $+6V$) FLAT PACKAGE
C-MOS HEX INVERTER
- TOP VIEW -

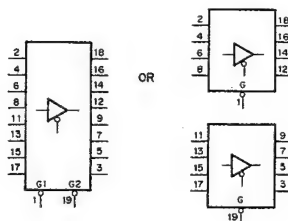


SN74HC244NS (TI) FLAT PACKAGE
TC40H244F (TOSHIBA) FLAT PACKAGE
C-MOS BUS BUFFER WITH 3-STATE OUTPUTS
- TOP VIEW -

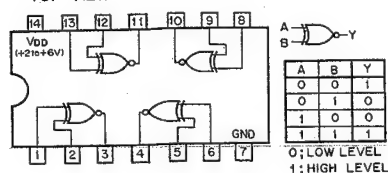


NOTE:

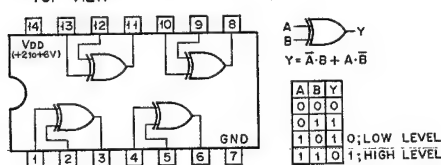
TYPE	V_{DD}
AC HC 40H	+2 to +6V
ACT HCT	+5V



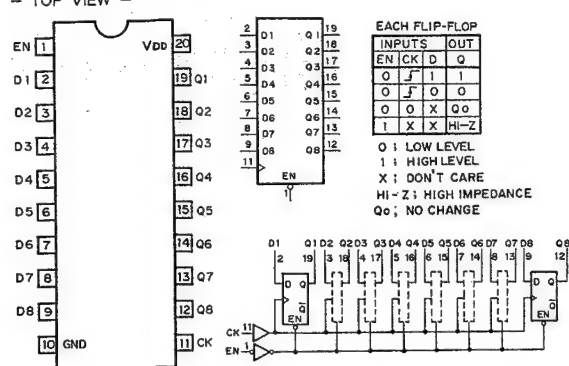
SN74HC266NS (TI) FLAT PACKAGE
C-MOS 2-INPUT EXCLUSIVE-NOR GATE
- TOP VIEW -



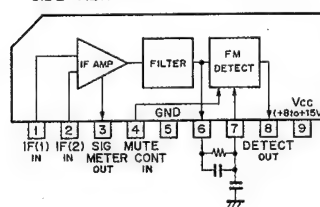
SN74HC86NS (TI) FLAT PACKAGE
C-MOS EXCLUSIVE OR GATE
- TOP VIEW -



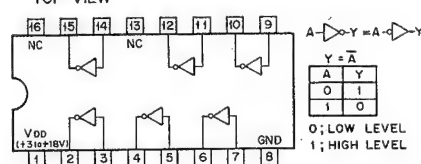
SN74HC574NS (TI) ($V_{DD} = +2$ to $+6V$) FLAT PACKAGE
C-MOS 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP
- TOP VIEW -



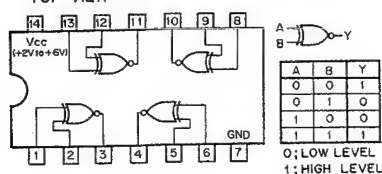
TA7303P (TOSHIBA)
FM IF AMPLIFIER/DETECTOR
- SIDE VIEW -



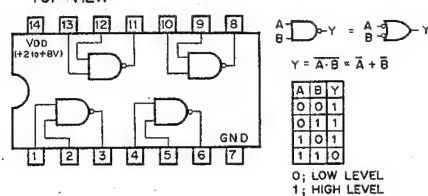
TC4049BF (TOSHIBA) FLAT PACKAGE
C-MOS INVERTING TYPE BUFFER/CONVERTER
- TOP VIEW -



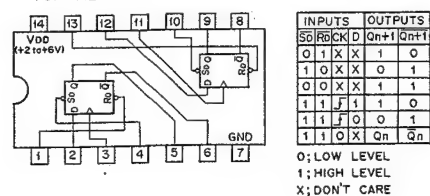
SN74HC7266NS (TI) FLAT PACKAGE
C-MOS 2-INPUT EXCLUSIVE-NOR GATES
- TOP VIEW -



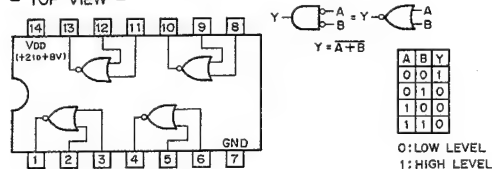
TC40H000F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NAND GATE
- TOP VIEW -



SN74HC74NS (TI) FLAT PACKAGE
C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
- TOP VIEW -

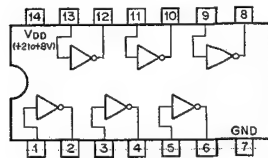


TC40H002F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NOR GATE
- TOP VIEW -



TC40H004F (TOSHIBA) FLAT PACKAGE

C-MOS INVERTER
- TOP VIEW -

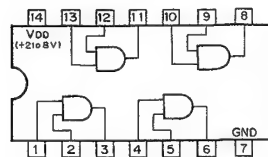


$$Y = \bar{A}$$

A	Y
0	1
1	0

TC40H008F (TOSHIBA) FLAT PACKAGE

C-MOS 2-INPUT POSITIVE-AND GATE
- TOP VIEW -

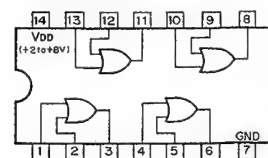


$$Y = A \cdot B$$

A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

TC40H032F (TOSHIBA) FLAT PACKAGE

C-MOS 2-INPUT POSITIVE-OR GATE
- TOP VIEW -

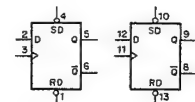
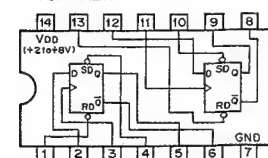


$$Y = A + B$$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

TC40H074F (TOSHIBA) FLAT PACKAGE

C-MOS HIGH SPEED D-TYPE FLIP-FLOP WITH DIRECT SET/RESET
- TOP VIEW -

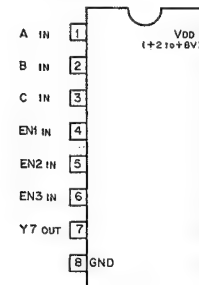


1n	1n + 1
0	0
0	1
1	1

INPUT		OUTPUT	
RD	SD	Q	Q̄
0	0	1	1
0	1	0	1
1	0	1	0
1	1	D-MODE	

TC40H138F (TOSHIBA) FLAT PACKAGE

C-MOS 3-TO-8-LINE DECODER/DEMULPLEXER
- TOP VIEW -

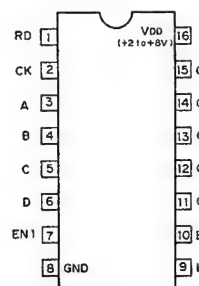


INPUTS				OUTPUTS							
EN	C	B	A	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	X	X	X	1	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1	1	1	1	0
1	0	0	1	1	1	1	1	1	1	0	1
1	0	1	0	1	1	1	1	1	0	1	1
1	0	1	1	1	1	1	1	0	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
1	1	0	1	1	1	0	1	1	1	1	1
1	1	1	0	1	0	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	1	1	1

EN = EN1 · EN2 · EN3
0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

TC40H163F (TOSHIBA) FLAT PACKAGE

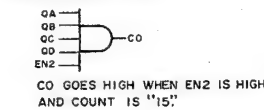
C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
- TOP VIEW -



MODE SELECTION				
CONT. INPUTS				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

COUNT SEQUENCE				
COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	1	0	0	0
5	1	0	0	1
6	1	0	1	0
7	1	0	1	1
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

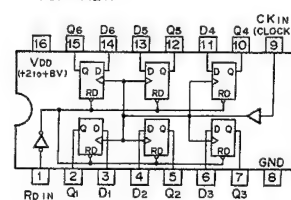
CARRY OUTPUT "CO"



0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

TC40H174F (TOSHIBA) FLAT PACKAGE

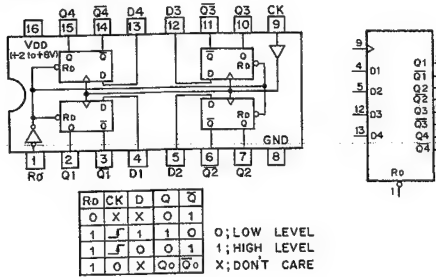
C-MOS D-TYPE FLIP-FLOP
- TOP VIEW -



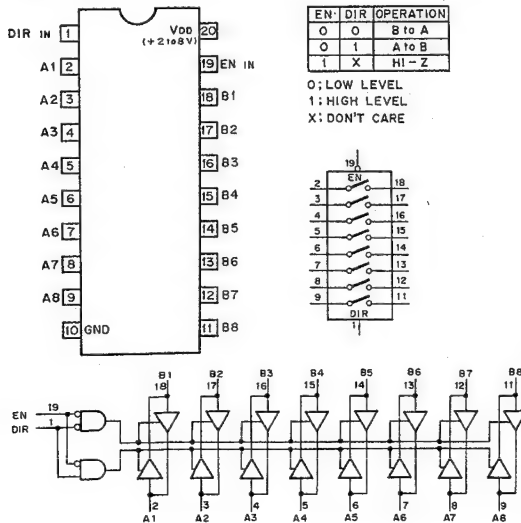
INPUTS		OUTPUT	
CK	D	Rd	Q
0	0	1	0
1	1	1	1
1	X	1	Q0
X	X	0	0

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

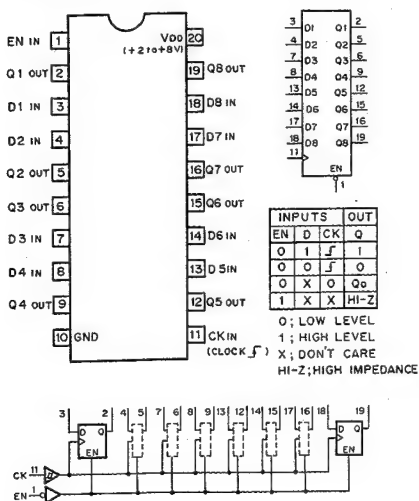
TC40H175F (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP-FLOP WITH CLEAR
- TOP VIEW -



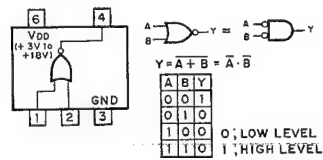
TC40H245F (TOSHIBA) FLAT PACKAGE
C-MOS BILATERAL BUS TRANSCEIVERS WITH 3-STATE OUTPUT
- TOP VIEW -



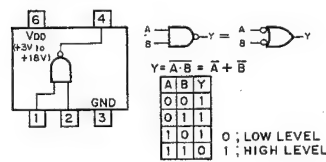
TC40H374F (TOSHIBA) FLAT PACKAGE
C-MOS 3-STATE OUTPUTS OCTAL D-TYPE FLIP-FLOP
- TOP VIEW -



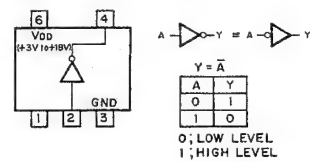
TC4S01F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NOR GATE
- TOP VIEW -



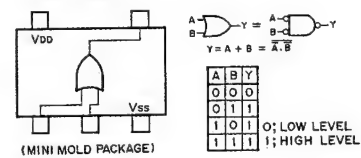
TC4S11F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NAND GATE
- TOP VIEW -



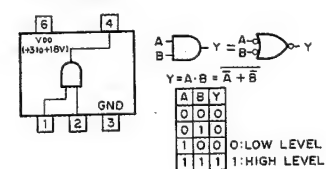
TC4S69F (TOSHIBA) FLAT PACKAGE
TC4SU69F (TOSHIBA) FLAT PACKAGE
C-MOS INVERTER BUFFER
- TOP VIEW -



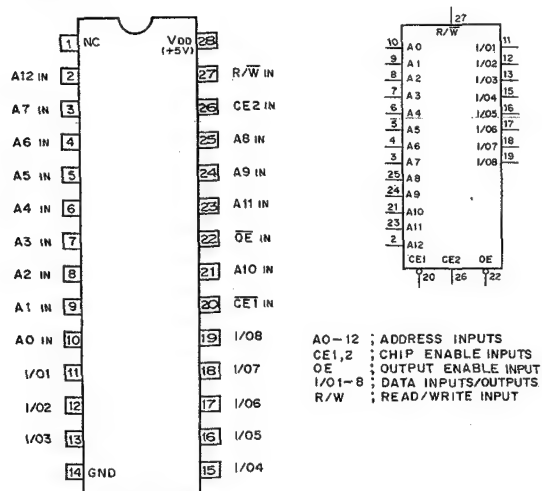
TC4S71F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT OR GATE
- TOP VIEW -



TC4S81F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT AND GATE
- TOP VIEW -

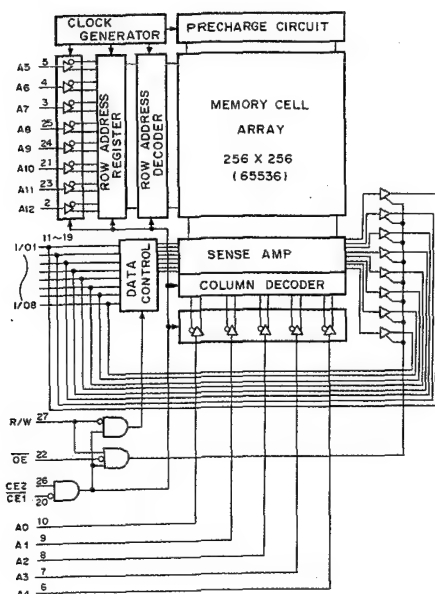


TC5564APL-15 (TOSHIBA) (ACCESS TIME = 150ns)
 TC5564AFL-15 (TOSHIBA) (ACCESS TIME = 150ns) FLAT PACKAGE
 C-MOS 8192 WORDx8-BIT STATIC RAM
 - TOP VIEW -

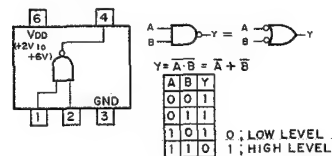


MODE	CE1	CE2	OE	R/W	I/O1-8
READ	0	1	0	1	DATA OUTPUTS
WRITE	0	1	X	0	DATA INPUTS
OUTPUT DISABLE	X	X	1	X	HI-Z
STANDBY	1	X	X	X	HI-Z
	X	0	X	X	HI-Z

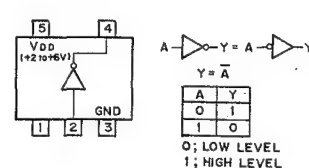
0 : LOW LEVEL
 1 : HIGH LEVEL
 X : DON'T CARE
 HI-Z : HIGH IMPEDANCE



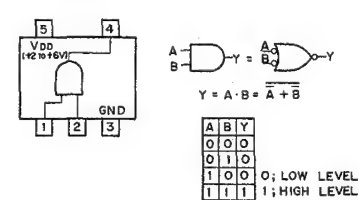
TC7S00F (TOSHIBA) FLAT PACKAGE
 C-MOS 2-INPUT NAND GATE
 - TOP VIEW -



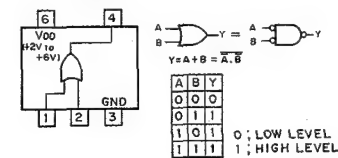
TC7S04F (TOSHIBA) FLAT PACKAGE
 C-MOS INVERTER
 - TOP VIEW -



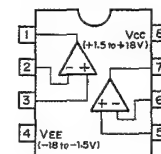
TC7S08F (TOSHIBA) FLAT PACKAGE
 C-MOS 2-INPUT AND GATE
 - TOP VIEW -



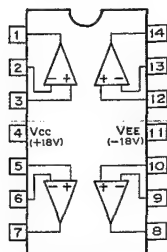
TC7S32F (TOSHIBA) FLAT PACKAGE
 C-MOS 2-INPUT OR GATE
 - TOP VIEW -



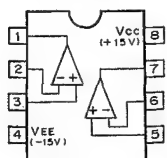
TL062CP (TI)
 TL062CPS (TI) FLAT PACKAGE
 OPERATIONAL AMPLIFIER
 (JFET INPUT)
 - TOP VIEW -



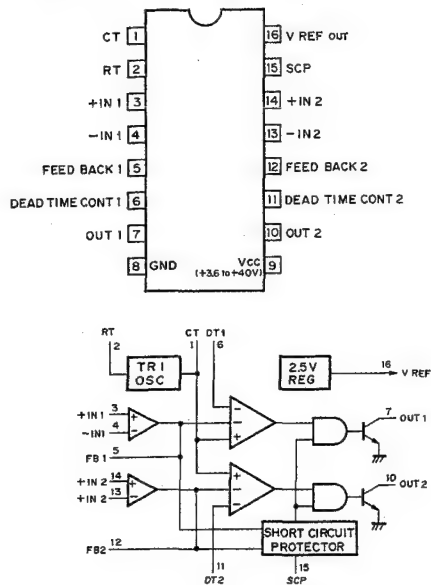
TL064CNS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
- TOP VIEW -



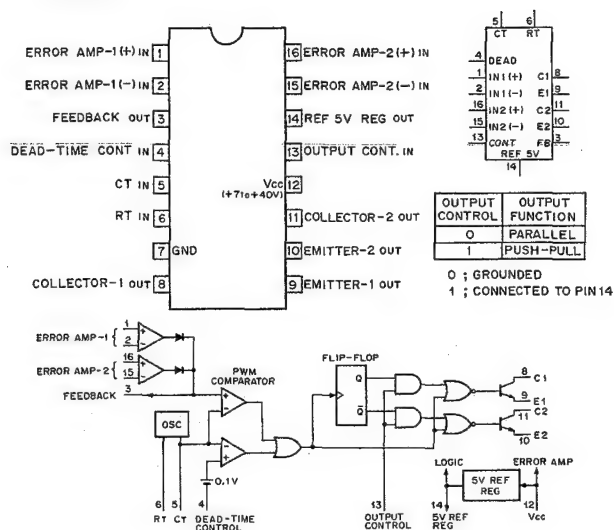
TL082CPS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
- TOP VIEW -



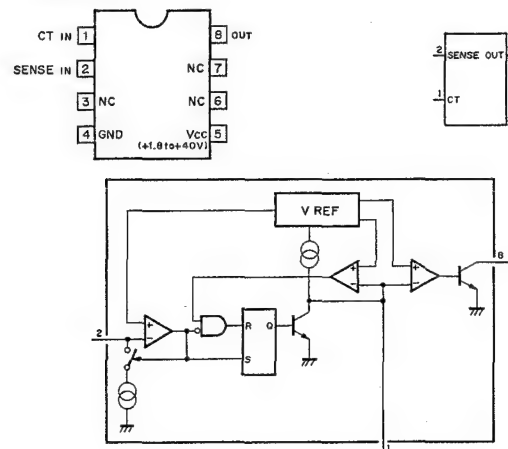
TL1451ACN (TI)
DUAL PWM POWER CONTROLLER
- TOP VIEW -



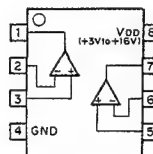
TL494CN (TI)
PWM POWER CONTROL
- TOP VIEW -



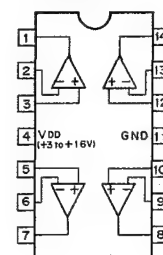
TL7700CPS (TI) FLAT PACKAGE
VARIABLE SUPPLY VOLTAGE SUPERVISOR
- TOP VIEW -



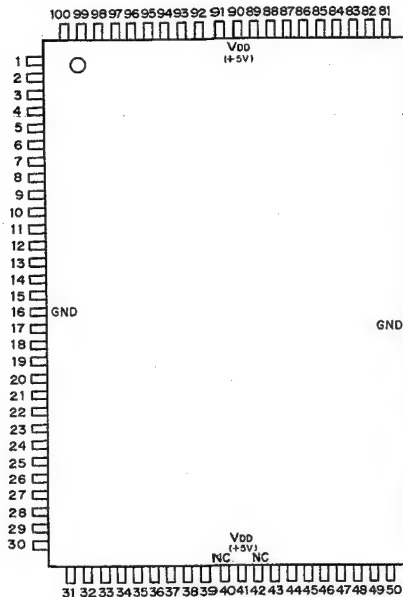
TLC27L2CPS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
- TOP VIEW -



TLC27L4CNS (TI) FLAT PACKAGE
C-MOS OPERATIONAL AMPLIFIER
- TOP VIEW -

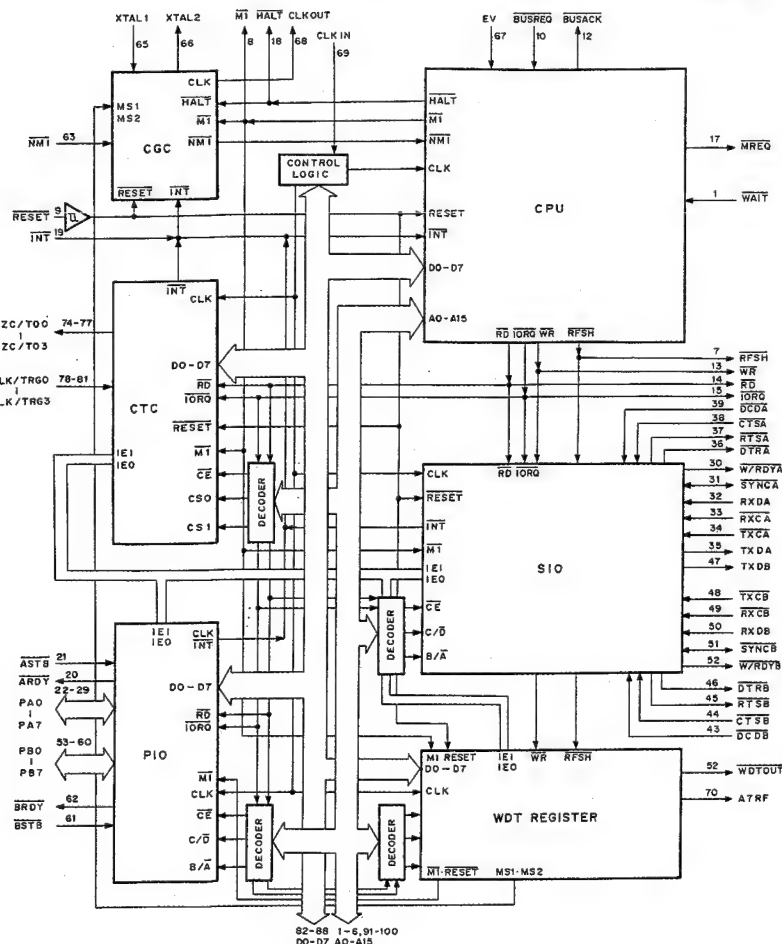


TMPZ84C015AF (TOSHIBA) FLAT PACKAGE
 TMPZ84C015AF-6 (TOSHIBA) FLAT PACKAGE
 TMPZ84C015BF-6 (TOSHIBA) FLAT PACKAGE
 CMOS 8-BIT MICROPROCESSOR
 - TOP VIEW -



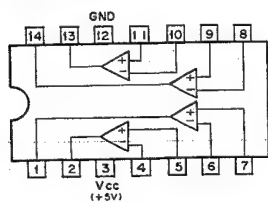
NO.	IN	OUT	SYMBOL	NO.	IN	OUT	SYMBOL
1	O	A5		51	O	SYNCA	
2	O	A4		52	O	W/RDYB	
3	O	A3		53	O	PB0	
4	O	A2		54	O	PB1	
5	O	A1		55	O	PB2	
6	O	A0		56	O	PB3	
7	O	RFSH		57	O	PB4	
8	O	N1		58	O	PB5	
9	O	REST		59	O	PB6	
10	O	BUSREQ		60	O	PB7	
11	O	WAIT		61	O	BSTB	
12	O	BUSACK		62	O	BRDY	
13	O	WR		63	O	NMI	
14	O	RD		64	O	GND	
15	O	IORQ		65	O	XTAL1	
16	O	GND		66	O	XTAL2	
17	O	MREQ		67	O	EV	
18	O	HALT		68	O	CLKOUT	
19	O	INT		69	O	CLKIN	
20	O	ARDY		70	O	A7RF	
21	O	ASTB		71	O	IEI	
22	O	PA7		72	O	IEI	
23	O	PA6		73	O	WDPOUT	
24	O	PA5		74	O	ZC/TO0	
25	O	PA4		75	O	ZC/TO1	
26	O	PA3		76	O	ZC/TO2	
27	O	PA2		77	O	ZC/TO3	
28	O	PA1		78	O	CLK/TRG3	
29	O	PA0		79	O	CLK/TRG2	
30	O	W/RDYA		80	O	CLK/TRG1	
31	O	SYNCA		81	O	CLK/TRG0	
32	O	RXDA		82	O	D7	
33	O	RXCA		83	O	D6	
34	O	TXCA		84	O	D5	
35	O	TXDA		85	O	D4	
36	O	DTXA		86	O	D3	
37	O	RTSA		87	O	D2	
38	O	CTSA		88	O	D1	
39	O	DCDA		89	O	D0	
40	O	NC		90	O	VDD	
41	O	VDD		91	O	A15	
42	O	NC		92	O	A14	
43	O	DCDB		93	O	A13	
44	O	CTSB		94	O	A12	
45	O	RTSB		95	O	A11	
46	O	DTRB		96	O	A10	
47	O	TXCB		97	O	A9	
48	O	RXCB		98	O	A8	
49	O	TXCB		99	O	A7	
50	O	RXDB		100	O	A6	

NO.	IN	OUT	SYMBOL	NO.	IN	OUT	SYMBOL
89	O	NMI		6	O	A0	
88	O	D1		5	O	A1	
87	O	D2		4	O	A2	
86	O	D3		3	O	A3	
85	O	D4		2	O	A4	
84	O	D5		1	O	A5	
83	O	D6		100	O	A6	
82	O	D7		99	O	A7	
81	O	PA0		98	O	A8	
80	O	PA1		97	O	A9	
79	O	PA2		96	O	A10	
78	O	PA3		95	O	A11	
77	O	PA4		94	O	A12	
76	O	PA5		93	O	A13	
75	O	PA6		92	O	A14	
74	O	PA7		91	O	A15	
73	O	RFSH		7	O	A7RF	
72	O	IEI		6	O	A7RF	
71	O	IEI		5	O	A7RF	
70	O	WDPOUT		4	O	A7RF	
69	O	ZC/TO0		3	O	A7RF	
68	O	ZC/TO1		2	O	A7RF	
67	O	ZC/TO2		1	O	A7RF	
66	O	ZC/TO3		0	O	A7RF	
65	O	CLK/TRG3		0	O	A7RF	
64	O	CLK/TRG2		0	O	A7RF	
63	O	CLK/TRG1		0	O	A7RF	
62	O	CLK/TRG0		0	O	A7RF	
61	O	D7		0	O	A7RF	
60	O	D6		0	O	A7RF	
59	O	D5		0	O	A7RF	
58	O	D4		0	O	A7RF	
57	O	D3		0	O	A7RF	
56	O	D2		0	O	A7RF	
55	O	D1		0	O	A7RF	
54	O	D0		0	O	A7RF	
53	O	VDD		0	O	A7RF	
52	O	A15		0	O	A7RF	
51	O	A14		0	O	A7RF	
50	O	A13		0	O	A7RF	
49	O	A12		0	O	A7RF	
48	O	A11		0	O	A7RF	
47	O	A10		0	O	A7RF	
46	O	A9		0	O	A7RF	
45	O	A8		0	O	A7RF	
44	O	A7		0	O	A7RF	
43	O	A6		0	O	A7RF	
42	O	A5		0	O	A7RF	
41	O	A4		0	O	A7RF	
40	O	A3		0	O	A7RF	
39	O	A2		0	O	A7RF	
38	O	A1		0	O	A7RF	
37	O	A0		0	O	A7RF	
36	O	A5		0	O	A7RF	
35	O	A4		0	O	A7RF	
34	O	A3		0	O	A7RF	
33	O	A2		0	O	A7RF	
32	O	A1		0	O	A7RF	
31	O	A0		0	O	A7RF	
30	O	A5		0	O	A7RF	
29	O	A4		0	O	A7RF	
28	O	A3		0	O	A7RF	
27	O	A2		0	O	A7RF	
26	O	A1		0	O	A7RF	
25	O	A0		0	O	A7RF	
24	O	A5		0	O	A7RF	
23	O	A4		0	O	A7RF	
22	O	A3		0	O	A7RF	
21	O	A2		0	O	A7RF	
20	O	A1		0	O	A7RF	
19	O	A0		0	O	A7RF	
18	O	A5		0	O	A7RF	
17	O	A4		0	O	A7RF	
16	O	A3		0	O	A7RF	
15	O	A2		0	O	A7RF	
14	O	A1		0	O	A7RF	
13	O	A0		0	O	A7RF	
12	O	A5		0	O	A7RF	
11	O	A4		0	O	A7RF	
10	O	A3		0	O	A7RF	
9	O	A2		0	O	A7RF	
8	O	A1		0	O	A7RF	
7	O	A0		0	O	A7RF	
6	O	A5		0	O	A7RF	
5	O	A4		0	O	A7RF	
4	O	A3		0	O	A7RF	
3	O	A2		0	O	A7RF	
2	O	A1		0	O	A7RF	
1	O	A0		0	O	A7RF	

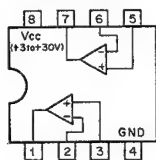


- A0-A15 : 3-STATE ADDRESS BUS OUTPUTS.
- BUSACK : BUS ACKNOWLEDGE OUTPUT
- BUSREQ : BUS REQUEST INPUT
- CLK/TRIG0-3 : EXTERNAL CLOCK/TIMER TRIGGER 0-3 INPUTS
- D0-D7 : 3-STATE DATA BUS INPUTS/OUTPUTS
- EV : EVALUATOR INPUT
- HALT : HALT OUTPUT
- IEI/IEO : CTC INTERRUPT ENABLE INPUT/OUTPUT
- INT : MASKABLE INTERRUPT REQUEST/INPUT
- IORQ : 3-STATE I/O REQUEST OUTPUT
- M1 : 3-STATE MACHINE CYCLE 1 OUTPUT
- MREQ : 3-STATE MEMORY REQUEST OUTPUT
- NMI : NON-MASKABLE INTERRUPT REQUEST INPUT
- PA0-PA7, PB0-PB7 : 3-STATE I/O PORT
- RD : 3-STATE READ OUTPUT
- REST : RESET INPUT
- RFSH : REFRESH OUTPUT
- WAIT : WAIT REQUEST INPUT
- WR : 3-STATE WRITE OUTPUT
- ZC/TO0-3 : ZERO COUNT/TIME OUT 0-3 OUTPUTS
- ASTB : PORT A STROBE PULSE INPUT
- ARDY : REGISTER A READY OUTPUT
- BSTB : PORT B STROBE PULSE INPUT
- BRDY : REGISTER B READY OUTPUT
- SYNCA, SYNCA : SYNC INPUT/OUTPUT
- W/RDYA, W/RDYB : WAIT/READY OUTPUT
- RXDA, RXDB : SERIAL DATA INPUT
- RXCA, RXCB : RECEIVE CLOCK INPUT
- TXCA, TXCB : TRANSMISSION CLOCK INPUT
- TXDA, TXDB : SERIAL DATA OUTPUT
- DTRA, DTRB : DATA TERMINAL READY OUTPUT
- RTSA, RTSB : TRANSMISSION REQUEST OUTPUT
- CTSA, CTSC : TRANSMISSION ENABLE INPUT
- DCDA, DCDB : DATA CARRIER DETECT OUTPUT
- WDTOUT : WATCH DOG TIMER OUTPUT

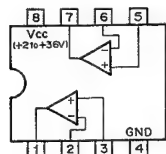
uPC339G2 (NEC) FLAT PACKAGE
COMPARATOR
- TOP VIEW -



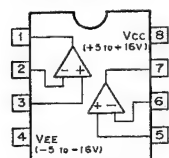
uPC358G2 (NEC) FLAT PACKAGE
DUAL OPERATIONAL AMPLIFIERS
- TOP VIEW -



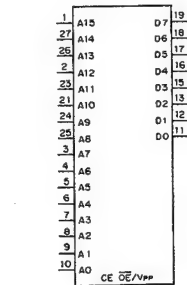
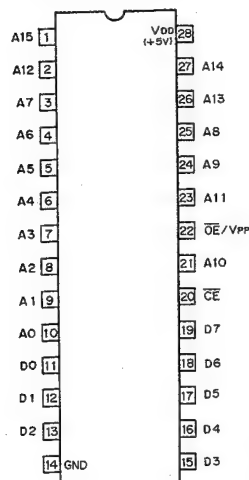
uPC393C (NEC)
uPC393G2 (NEC) FLAT PACKAGE
DUAL VOLTAGE COMPARATORS
- TOP VIEW -



uPC812G2 (NEC) FLAT PACKAGE
OPERATIONAL AMPLIFIER (JFET INPUT)
- TOP VIEW -



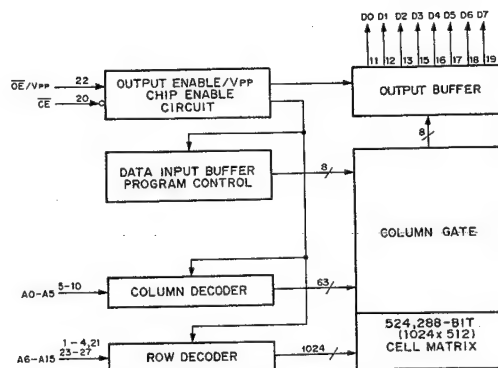
uPD27C512G-20 (NEC) (ACCESS TIME = 200ns) FLAT PACKAGE
C-MOS 512K(65,536x8 = 524,288)-BIT ONE TIME PROM
- TOP VIEW -



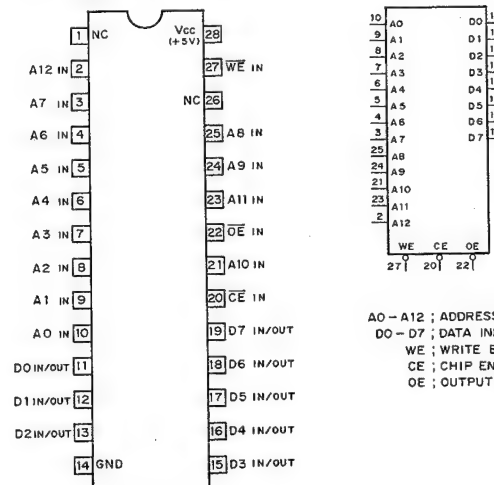
A0-A15; ADDRESS INPUTS
CE; CHIP ENABLE INPUT
D0-D7; DATA OUTPUTS
OE; OUTPUT ENABLE INPUT
Vpp; PROGRAM POWER SUPPLY

Pin	CE	OE/Vpp	Vcc	Dn	FUNCTION
A1N	0	0	+5V	DOUT	READ
A1N	0	1	+5V	HI-Z	OUTPUT DISABLE
X	1	X	+5V	HI-Z	STANDBY
A1N	0	+12.5V	+6V	DIN	PGM
A1N	0	0	+6V	DOUT	PGM VERIFY
X	1	+12.5V	+6V	HI-Z	PGM INH

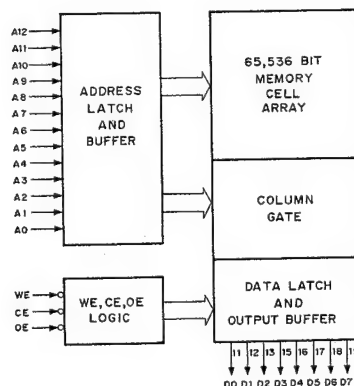
0; LOW LEVEL
1; HIGH LEVEL
HI-Z; HIGH IMPEDANCE
X; DON'T CARE



uPD28C64C-25 (NEC) (ACCESS TIME = 250ns)
C-MOS 64K (8Kx8) ELECTRICALLY ERASABLE PROM
- TOP VIEW -

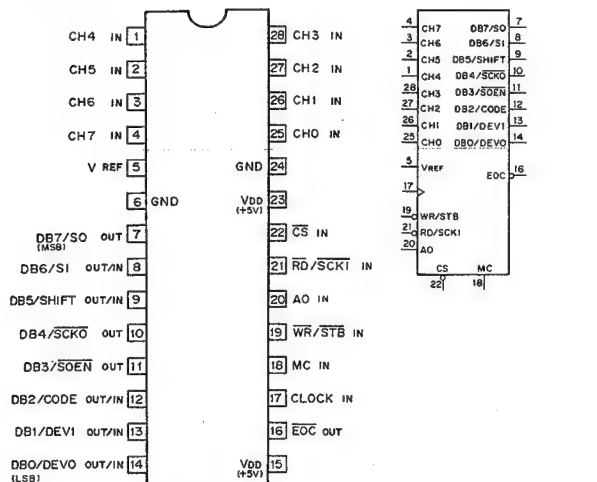


A0-A12; ADDRESS INPUTS
D0-D7; DATA INPUTS/OUTPUTS
WE; WRITE ENABLE INPUT
CE; CHIP ENABLE INPUT
OE; OUTPUT ENABLE INPUT



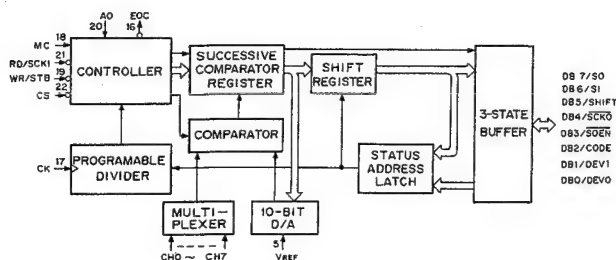
uPD7004C (NEC)

C-MOS 10-BIT SUCCESSIVE COMPARATOR TYPE A/D CONVERTER
- TOP VIEW -



AO ; CONTROL ADDRESS INPUT
CH0~7; ANALOG INPUT
CODE ; CODE SELECT (2'S COMPLEMENT/
BINARY) INPUT
CS ; CHIP SELECT INPUT
DB0~7; DATA BUS INPUT/OUTPUT
DEVO ;
DEVI ; CLOCK RATE SELECT INPUT
EOC ; CONVERSION ENDING SIGNAL
OUTPUT
MC ; MODE SELECT INPUT
RD ; READ SIGNAL INPUT

SCKI ; SERIAL CLOCK INPUT
SCKO ; SERIAL CLOCK OUTPUT
SHIFT ; SHIFT SELECT (LSB FIRST/
MSB FIRST)
SI ; SERIAL INPUT
SO ; SERIAL OUTPUT
SOEN ; SERIAL OUTPUT ENABLE OUTPUT
STB ; ADDRESS WRITE STROBE SIGNAL
INPUT
WR ; WRITE SIGNAL INPUT



MC	MODE
0	SERIAL
1	PARALLEL

PARALLEL MODE

CS	WR	RD	AO	MODE
1	X	X	X	HIGH IMPEDANCE
0	1	1	X	HIGH IMPEDANCE
0	0	1	0	*1 ANALOG CHANNEL SELECT
0	0	1	1	*2 CODE SELECT/ *3 CLOCK RATE SELECT
0	1	0	0	*4 LOW-BYTE DATA OUTPUT
0	1	0	1	*4 HIGH-BYTE DATA OUTPUT
0	0	0	X	INHIBIT

0; LOW LEVEL X: DON'T CARE
1; HIGH LEVEL

*2 CODE SELECT

CODE	CODE SELECT
0	BINARY DATA
1	2'S COMPLEMENT DATA

*3 CLOCK RATE SELECT

DEV1	DEV0	CLOCK RATE
0	0	1
0	1	1/2
1	0	1/4
1	1	1/8

*4 LOW/HIGH-BYTE DATA

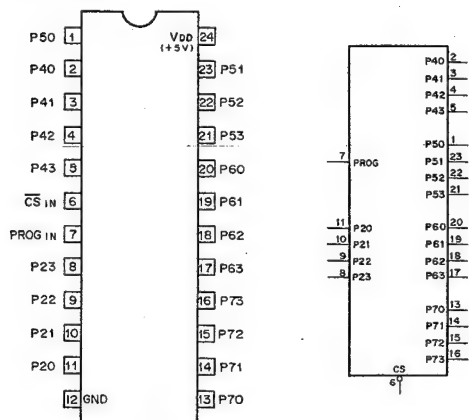
	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0
HIGH-BYTE MSB	2ND	3RD	4TH	5TH	6TH	7TH	8TH	
LOW-BYTE	9TH	0	0	0	0	0	0	0

*1 ANALOG CHANNEL

SEL2	SEL1	SELO	MPX CHAN.
0	0	0	CH0
0	0	1	CH1
0	1	0	CH2
0	1	1	CH3
1	0	0	CH4
1	0	1	CH5
1	1	0	CH6
1	1	1	CH7

uPD82C43G (NEC) FLAT PACKAGE

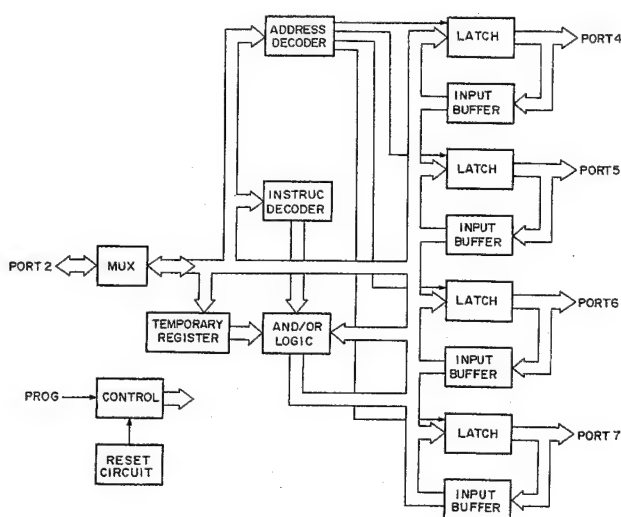
C-MOS I/O PORT EXPANDER
- TOP VIEW -



CONTROL AND PORT ADDRESSING

P23	P22	P21	P20	PORT	CONTROL
0	0	0	0	4	READ
0	0	0	1	5	
0	0	1	0	6	
0	0	1	1	7	
0	1	0	0	4	WRITE
0	1	0	1	5	
0	1	1	0	6	
0	1	1	1	7	
1	0	0	0	4	OR
1	0	0	1	5	
1	0	1	0	6	
1	0	1	1	7	
1	1	0	0	4	AND
1	1	0	1	5	
1	1	1	0	6	
1	1	1	1	7	

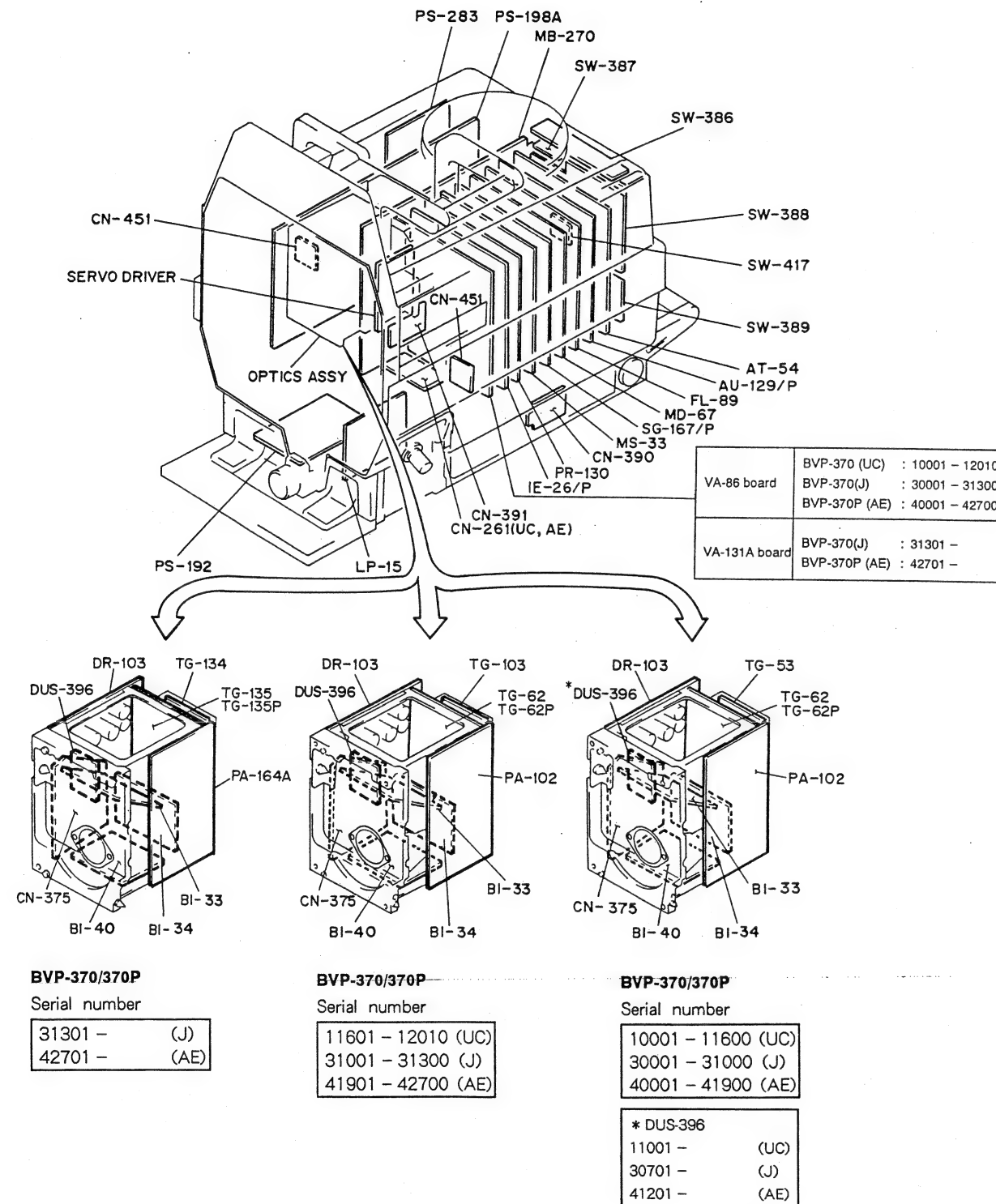
PROG; PROGRAM PULSE INPUT
CS; CHIP SELECT INPUT
P20~P23; I/O PORT2 (FOR CPU)
P40~P43; I/O PORT4
P50~P53; I/O PORT5
P60~P63; I/O PORT6
P70~P73; I/O PORT7



SECTION C

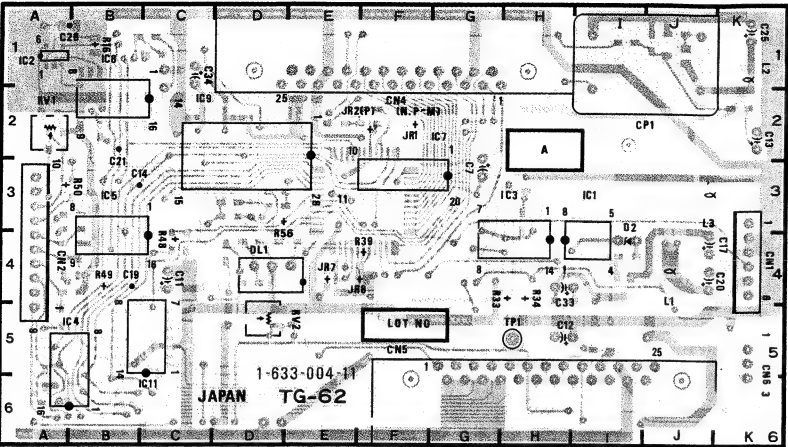
SCHEMATIC DIAGRAMS AND BOARD ILLUSTRATION

BOARD LAYOUT

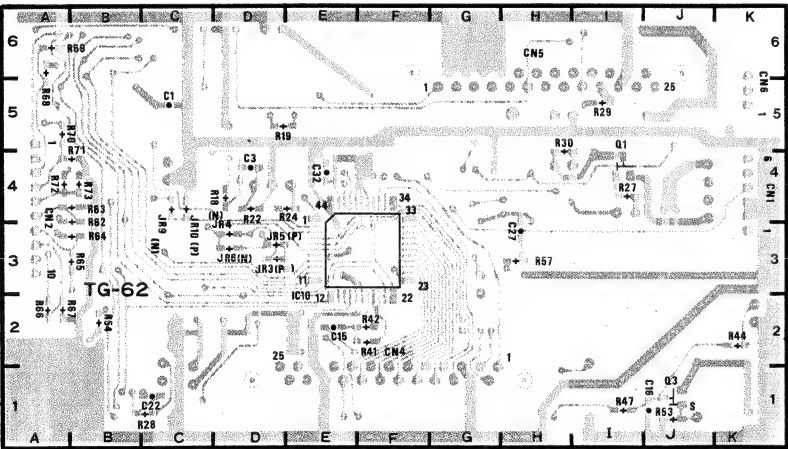


TG-62/62P BOARD

Serial No. 10001 - 10410 (UC)
30001 - 30305 (J)
40001 - 40420 (AE)



1-633-004-11 COMPONENT SIDE

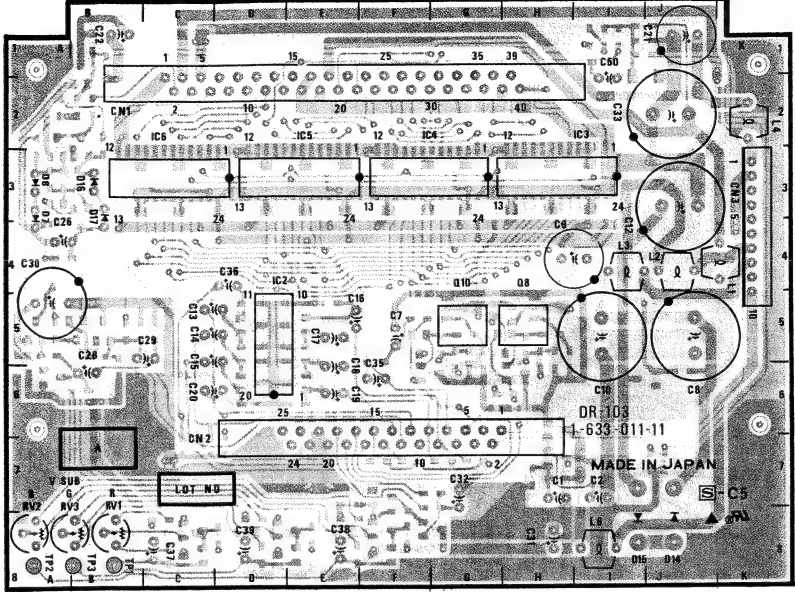


1-633-004-11 SOLDERING SIDE

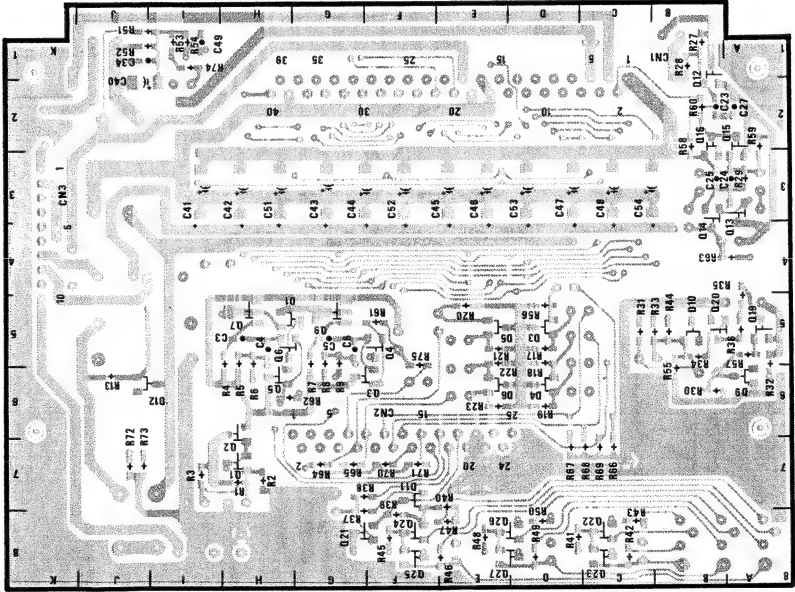
C-3 (a)

DR-103 BOARD

Serial No. 10001 - 10410 (UC)
30001 - 30305 (J)
40001 - 40420 (AE)



1-633-011-11 COMPONENT SIDE

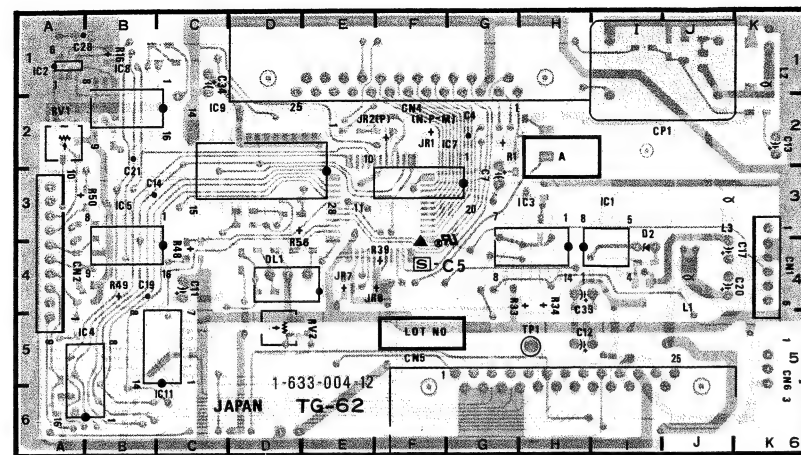


1-633-011-11 SOLDERING SIDE

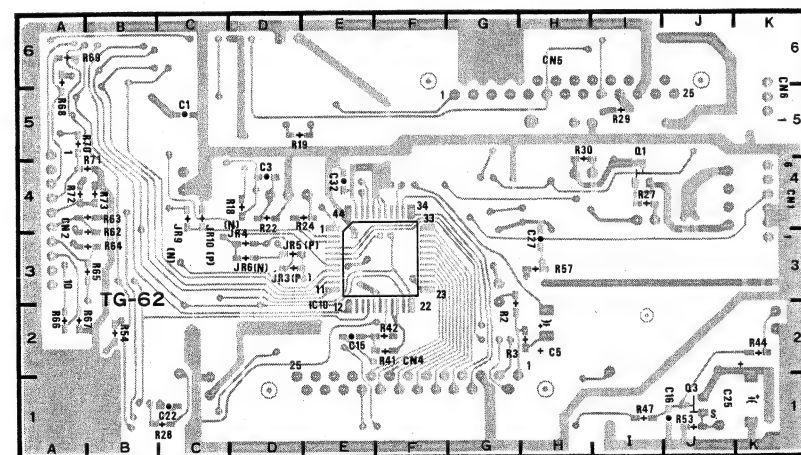
C-4 (a)

TG-62/62P BOARD

Serial No. 10501 – 10800 (UC)
30401 – 30600 (J)
40501 – 40900 (AE)



1-633-004-12 COMPONENT SIDE

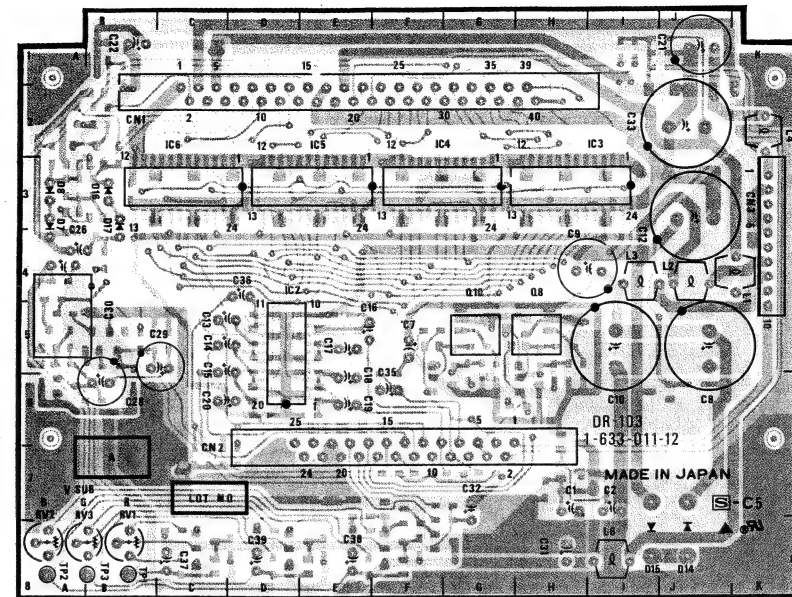


1-633-004-12 SOLDERING SIDE

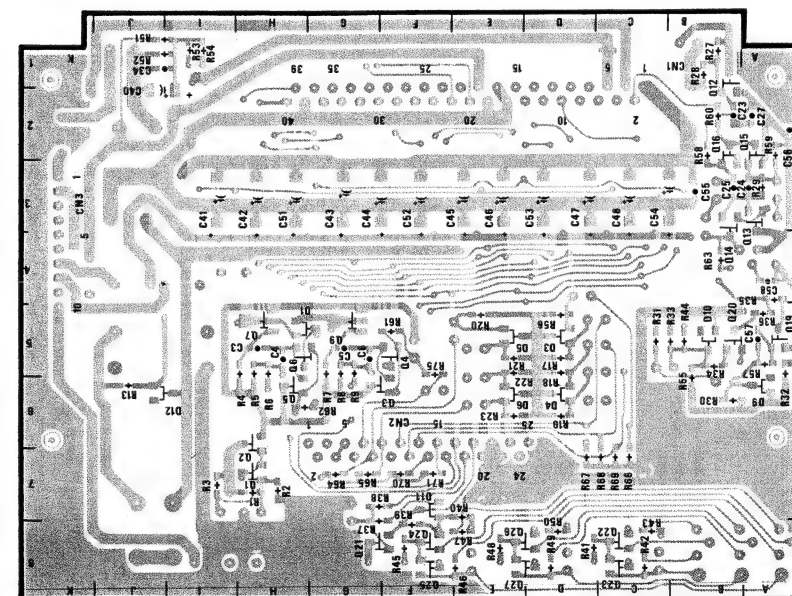
C-3 (b)

DR-103 BOARD

Serial No. 10501 – 10800 (UC)
30401 – 30600 (J)
40501 – 40900 (AE)



1-633-011-12 COMPONENT SIDE

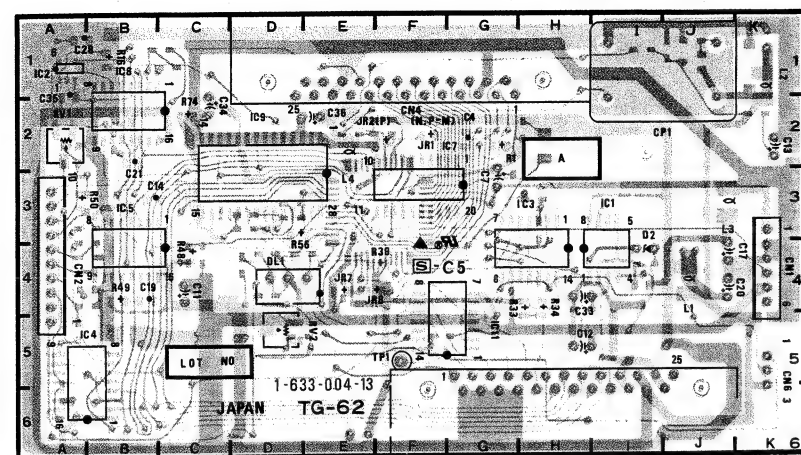


1-633-011-12 SOLDERING SIDE

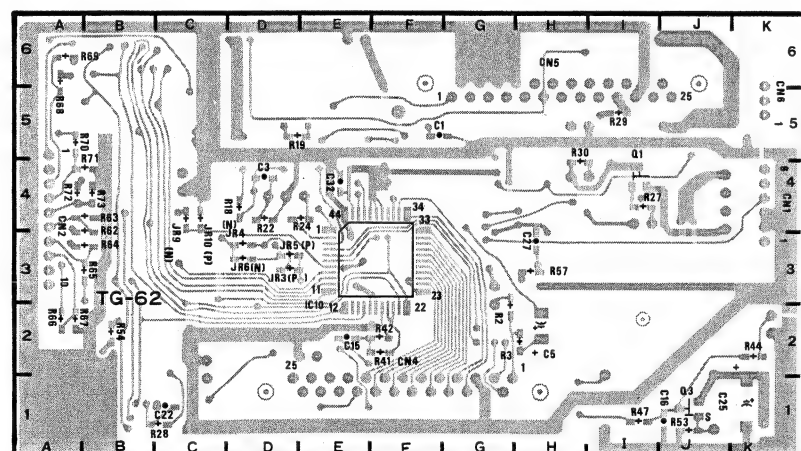
C-4 (b)

TG-62/62P BOARD

Serial No. 10801 - (UC)
30601 - (J)
40901 - (AE)



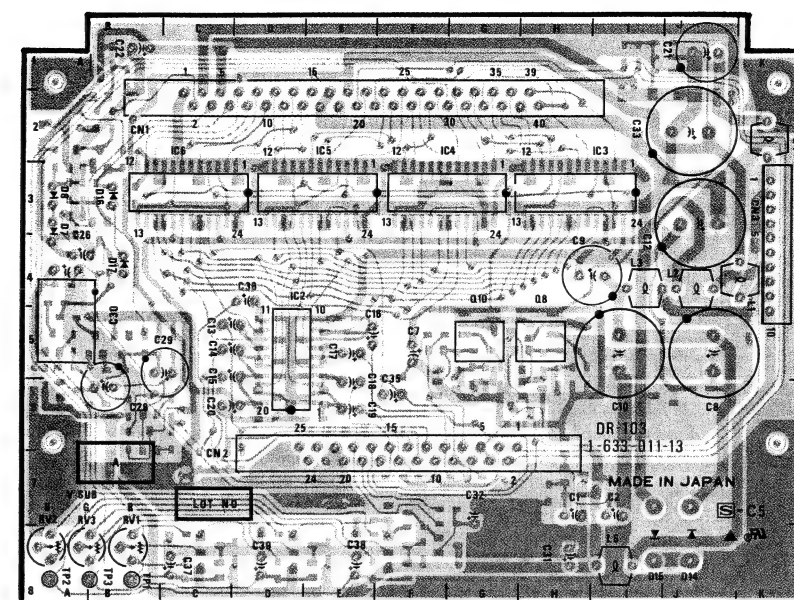
1-633-004-13 COMPONENT SIDE



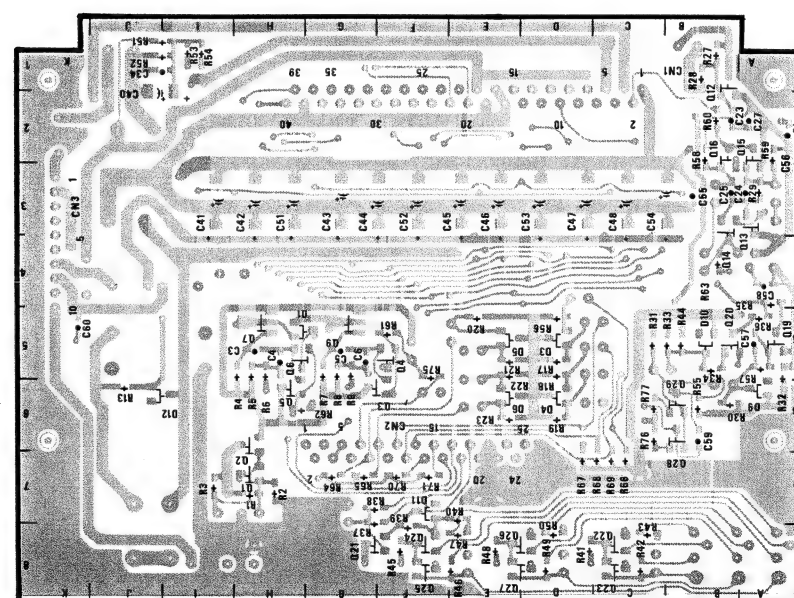
1-633-004-13 SOLDERING SIDE

DR-103 BOARD

Serial No. 10801 - 11100 (UC)
30601 - 30800 (J)
40901 - 41300 (AE)



1-633-011-13 COMPONENT SIDE



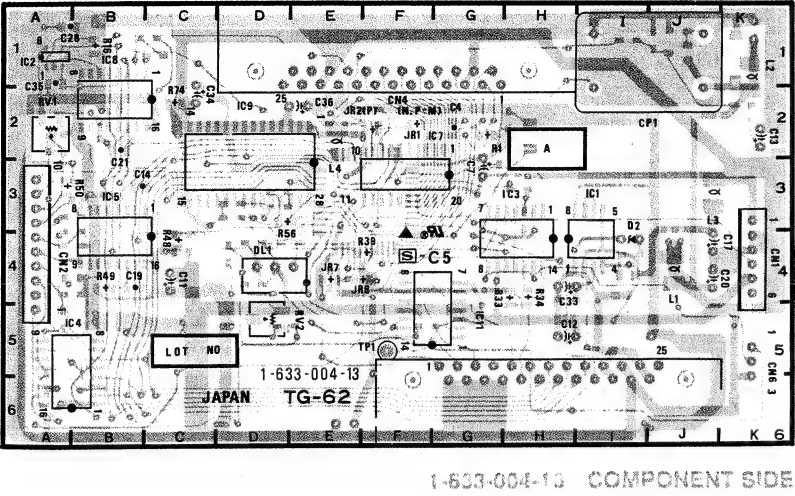
1-633-011-13 SOLDERING SIDE

TG-62/62P BOARD

Serial No. 10801 — (UC)

30601 — (J)

40901 — (AE)

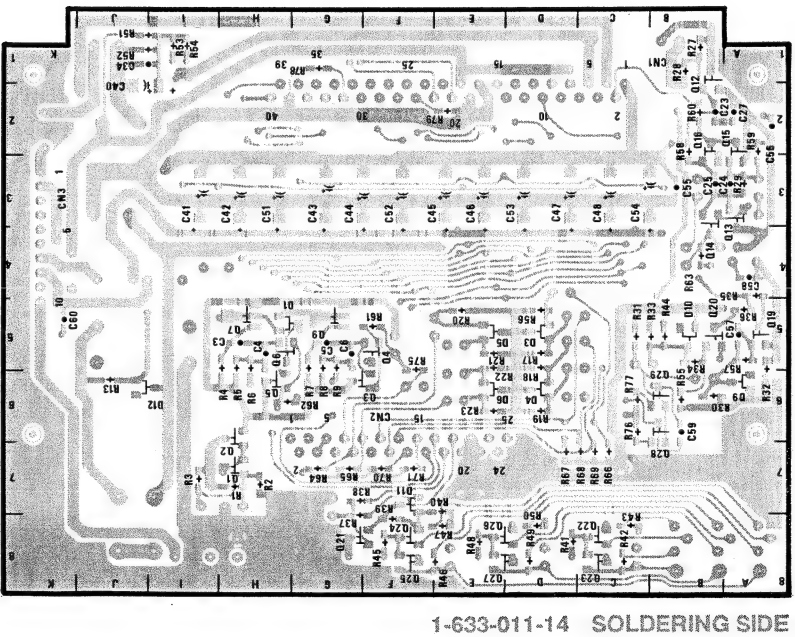
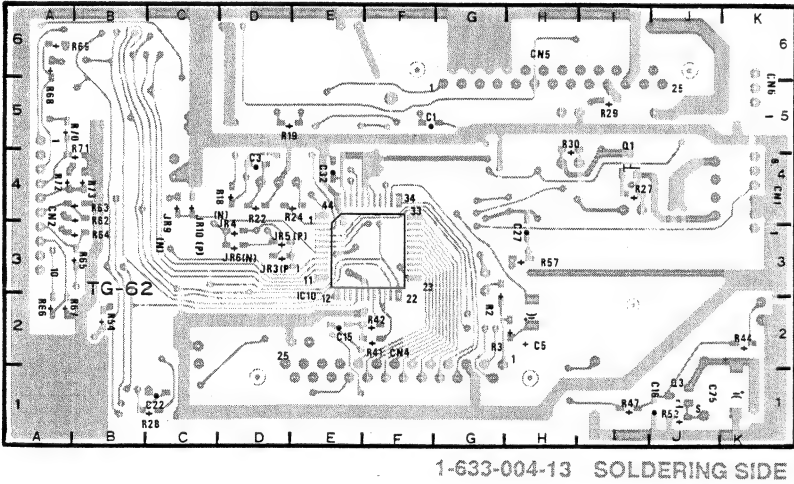
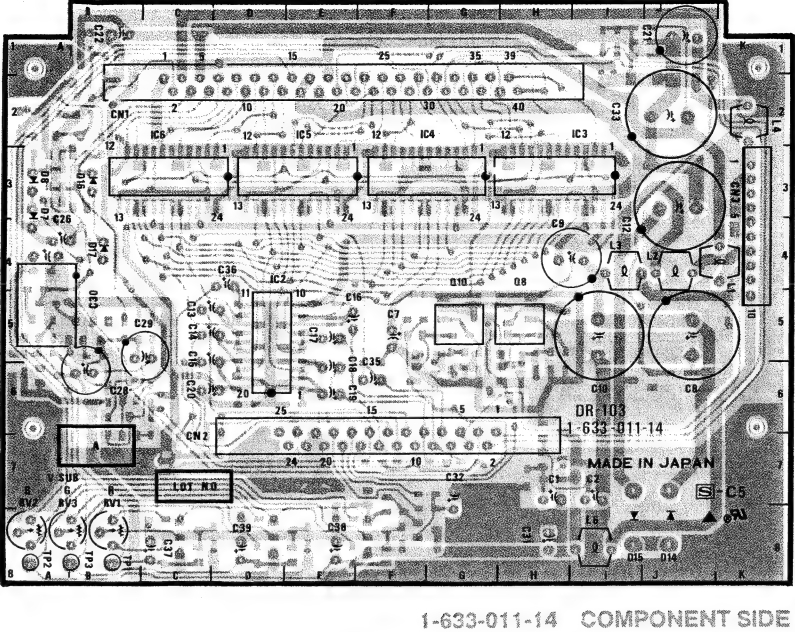


DR-103 BOARD

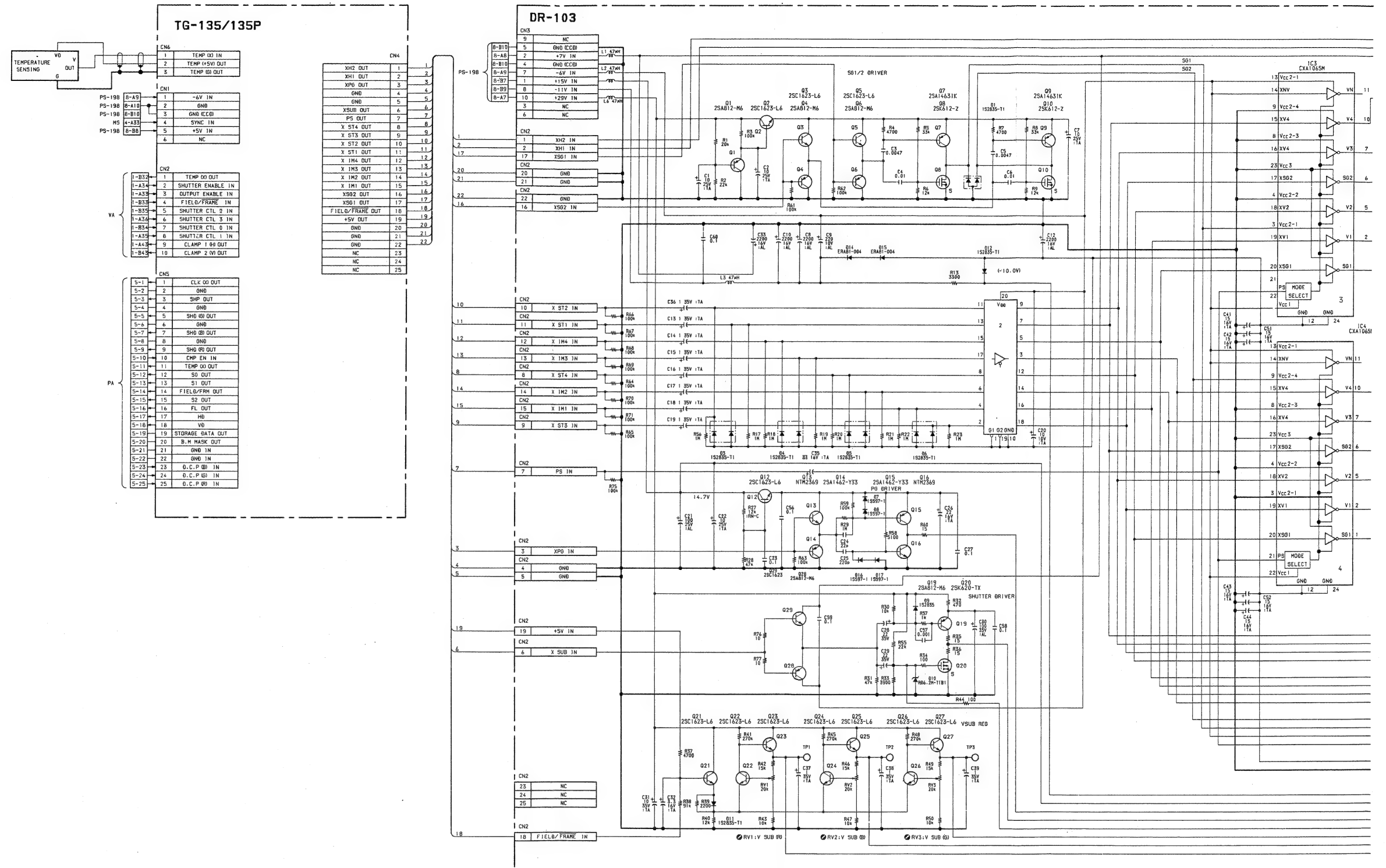
Serial No. 11101 — (UC)

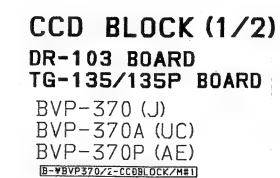
30801 — (J)

41301 — (AE)



Serial No. 31301 -	(J)
42701 -	(AE)





CCD BLOCK (1/2)

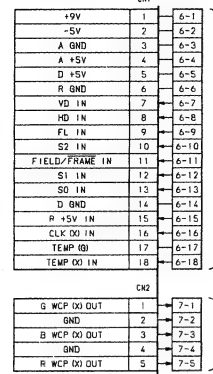
TG-53/103 BOARD

TG-62/62P BOARD

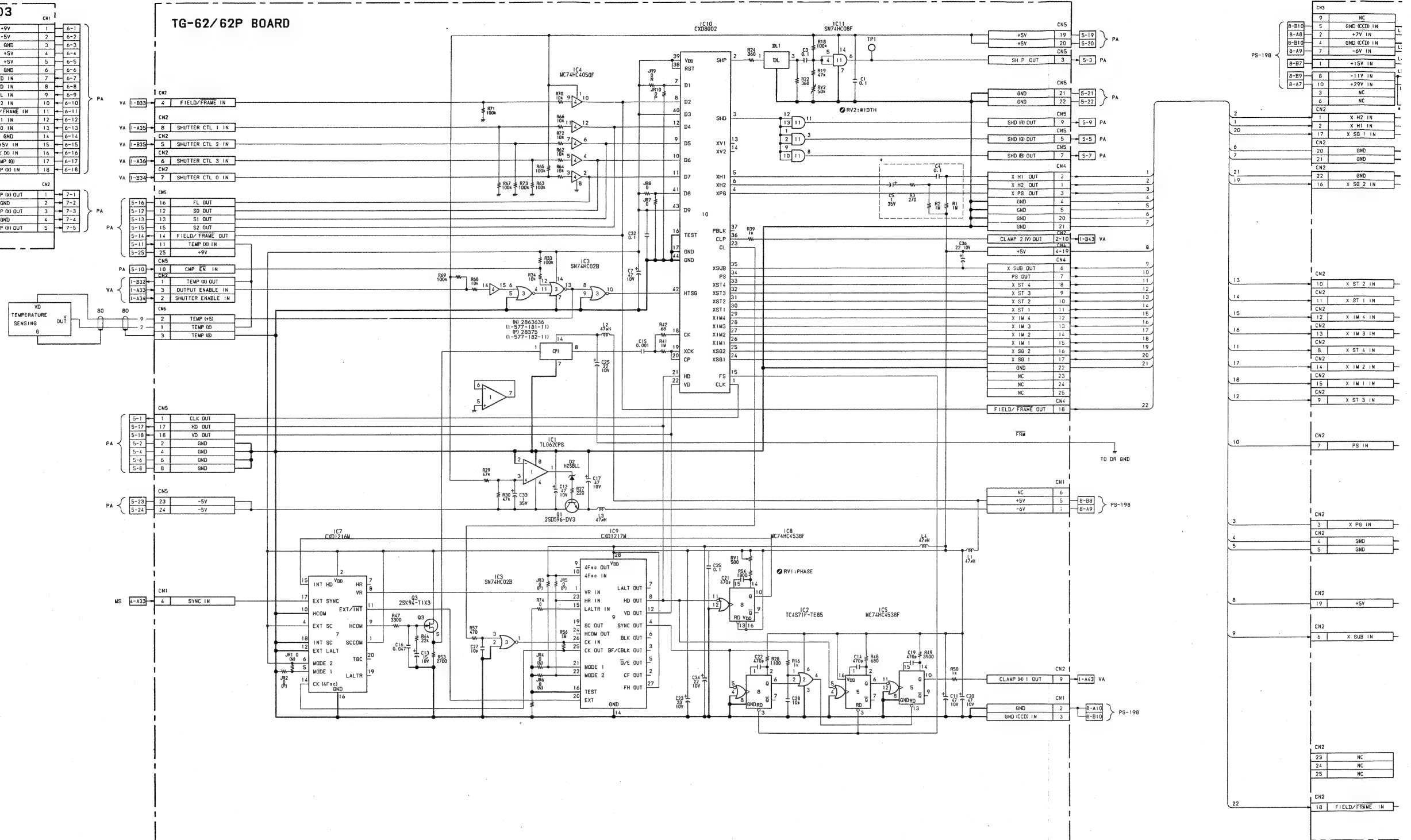
DR-103 BOARD

Serial No. 10001 - 12010 (UC)
30001 - 31300 (J)
40001 - 42700 (AE)

TG-53/103



TG-62/62P BOARD



*NOTE :TG-62/62P BOARD

REF. NO	CHANGE INFORMATION	SER. NO
C4, 5	ADD	10501- (UC) 30401- (J) 40501- (AE)
R1, 2, 3	ADD	10801- (UC) 30801- (J) 40901- (AE)
C37	DELETE	11101- (UC) 30701- (J) 41301- (AE)

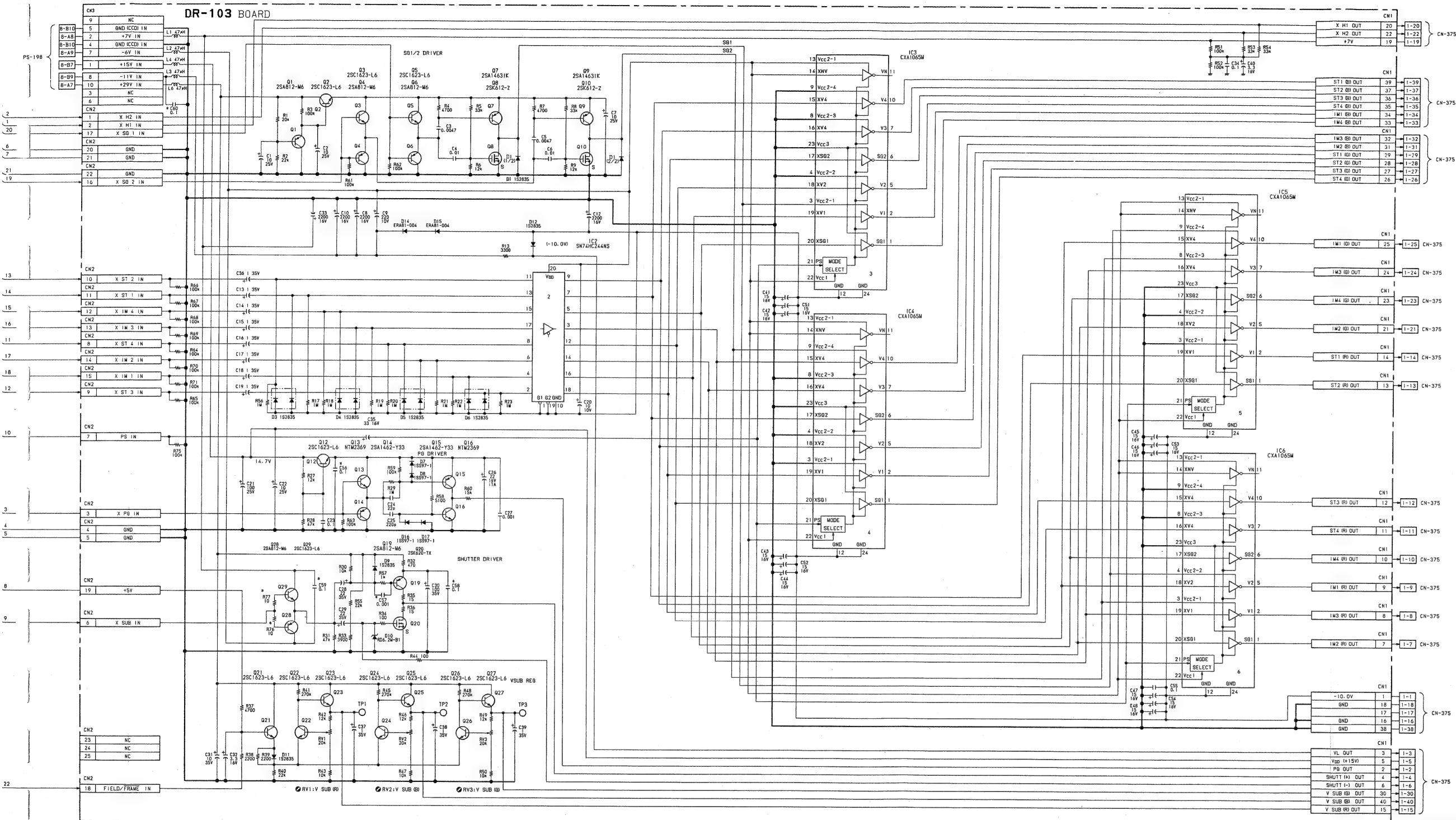
*NOTE :TG-62/62P BOARD

REF. NO	CHANGE INFORMATION	SER. NO
IC7	CX7998 → CXD1216M	11601- (UC) 31101- (J) 42001- (AE)

BVP-370/P

C-5 (a)

C-6 (a)



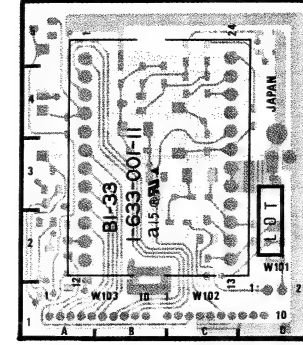
C-7 (a)

C-8 (a)

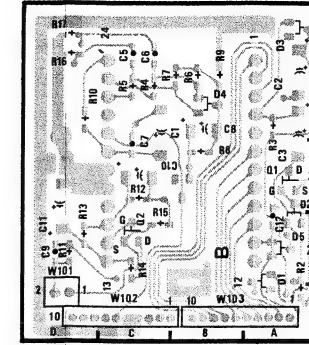
B-BVP370-CCD BLOCK/M#1

BI-33 BOARD

Serial No. 10001 – 10410 (UC)
30001 – 30305 (J)
40001 – 40420 (AE)



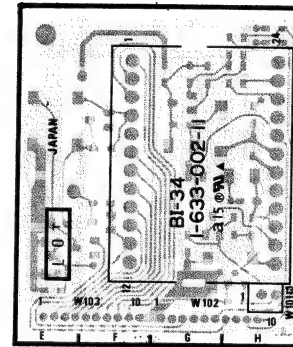
1-633-001-11
COMPONENT SIDE



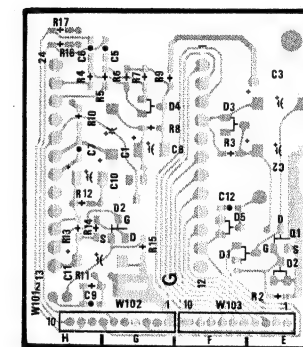
1-633-001-11
SOLDERING SIDE

BI-34 BOARD

Serial No. 10001 – 10410 (UC)
30001 – 30305 (J)
40001 – 40420 (AE)



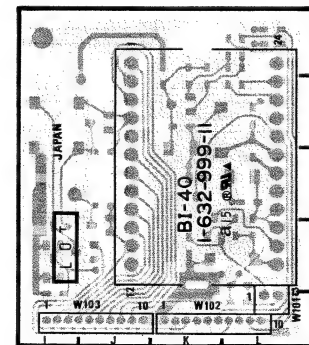
1-633-002-11
COMPONENT SIDE



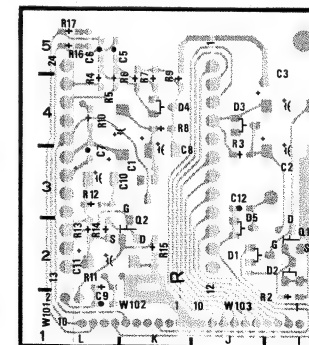
1-633-002-11
SOLDERING SIDE

BI-40 BOARD

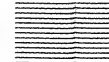
Serial No. 10001 - 10410 (UC)
30001 - 30305 (J)
40001 - 40420 (AE)



1-632-999-11
COMPONENT SIDE

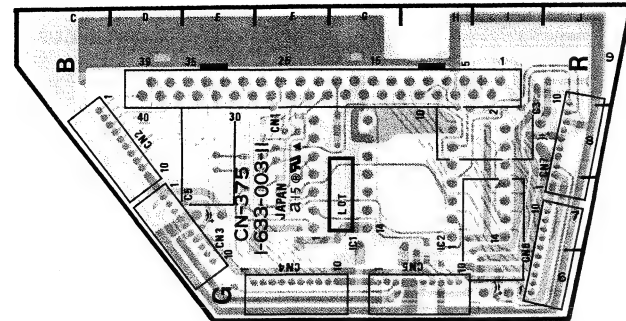


1-632-999-11
SOLDERING SIDE

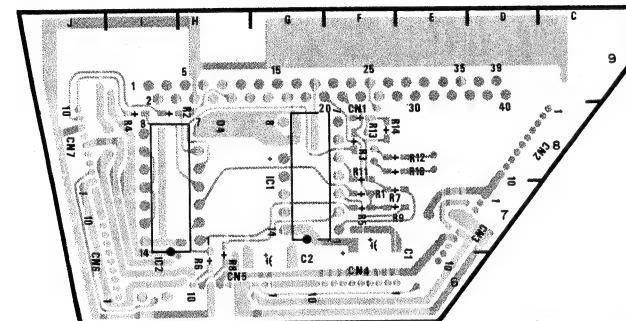


CN-375 BOARD

Serial No. 10001 - 10410 (UC)
30001 - 30305 (J)
40001 - 40420 (AE)



1-633-003-11 COMPONENT SIDE

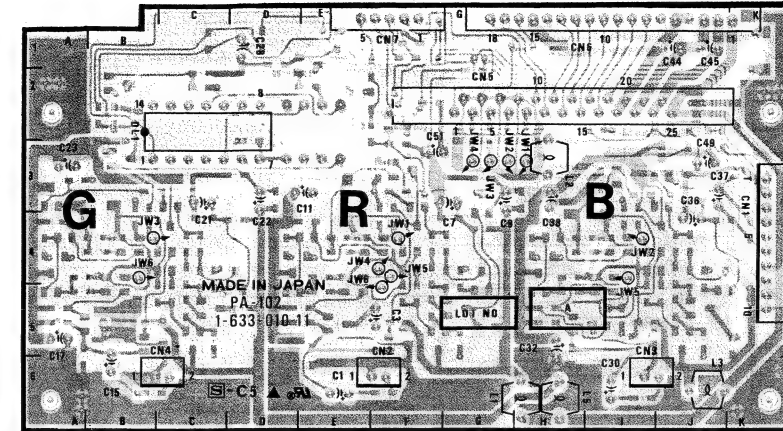


1-633-003-11 SOLDERING SIDE

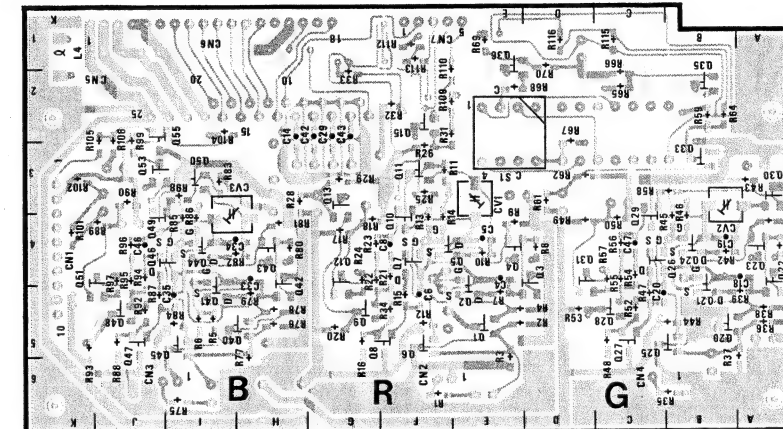
C-11 (a)

PA-102 BOARD

Serial No. 10001 - 10410 (UC)
30001 - 30305 (J)
40001 - 40420 (AE)



1-633-010-11 COMPONENT SIDE



1-633-010-11 SOLDERING SIDE

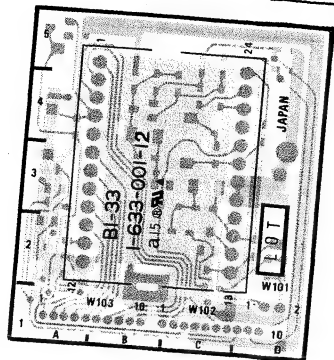
C-12 (a)

BVP-370/P

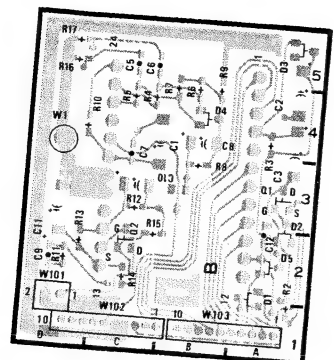
CCD BLCOK (2/2) BI-33, BI-34, BI-40
CN-375, PA-102

BI-33 BOARD

Serial No. 10501 - 10800 (UC)
30401 - 30600 (J)
40501 - 40900 (AE)



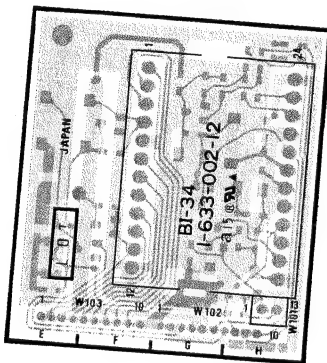
1-633-001-12
COMPONENT SIDE



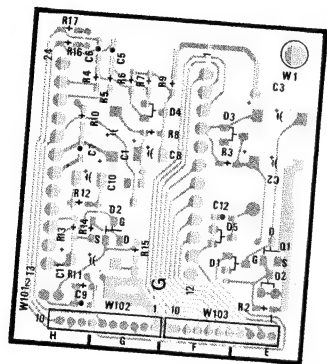
1-633-001-12
SOLDERING SIDE

BI-34 BOARD

Serial No. 10501 - 10800 (UC)
30401 - 30600 (J)
40501 - 40900 (AE)



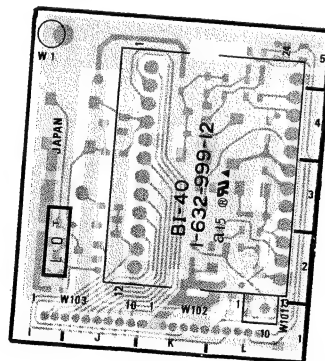
1-633-002-12
COMPONENT SIDE



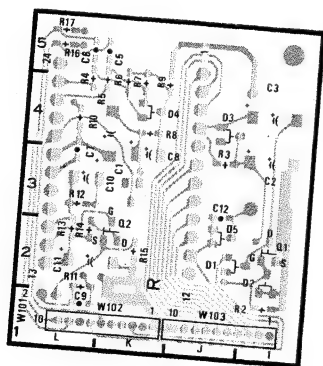
1-633-002-12
SOLDERING SIDE

BI-40 BOARD

Serial No. 10501 - 10800 (UC)
30401 - 30600 (J)
40501 - 40900 (AE)



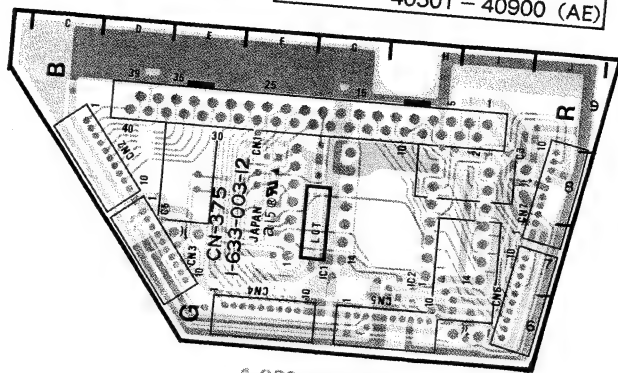
1-632-999-12
COMPONENT SIDE



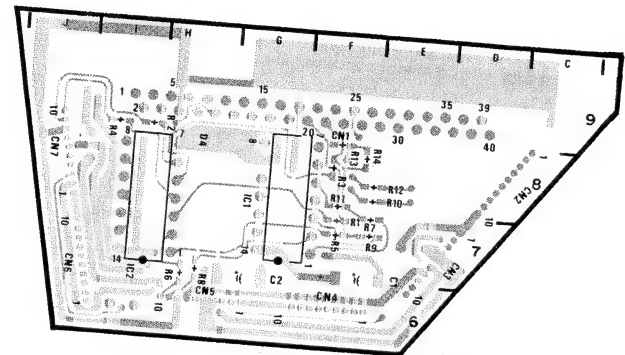
1-632-999-12
SOLDERING SIDE

CN-375 BOARD

Serial No. 10501 - 10800 (UC)
30401 - 30600 (J)
40501 - 40900 (AE)



1-633-003-12
COMPONENT SIDE



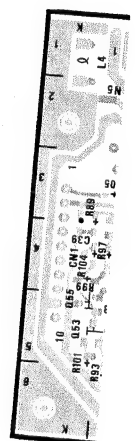
1-633-003-12
SOLDERING SIDE

BI-33, BI-34, BI-40
CN-375, PA-102 CCD BLOCK (2/2)



CCD BLC

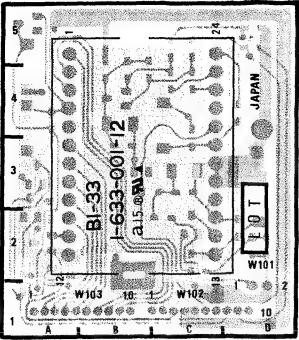
PA-102



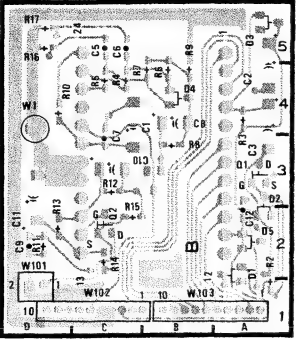
C-10 (b)

C-11 (b)

BI-33 BOARD
Serial No. 10801 - 11100 (UC)
30601 - 30800 (J)
40901 - 41300 (AE)

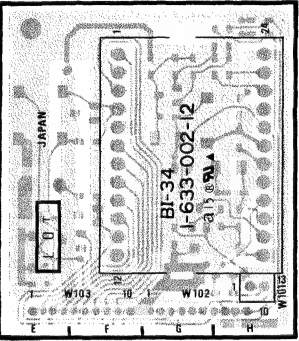


1-633-001-12
COMPONENT SIDE

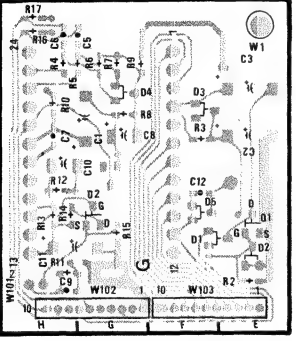


1-633-001-12
SOLDERING SIDE

BI-34 BOARD
Serial No. 10801 - 11100 (UC)
30601 - 30800 (J)
40901 - 41300 (AE)

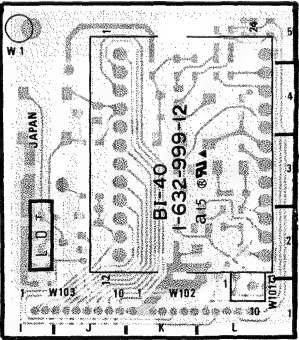


1-633-002-12
COMPONENT SIDE

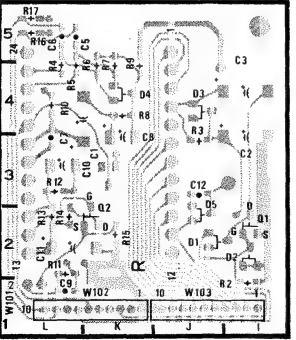


1-633-002-12
SOLDERING SIDE

BI-40 BOARD
Serial No. 10801 - 11100 (UC)
30601 - 30800 (J)
40901 - 41300 (AE)

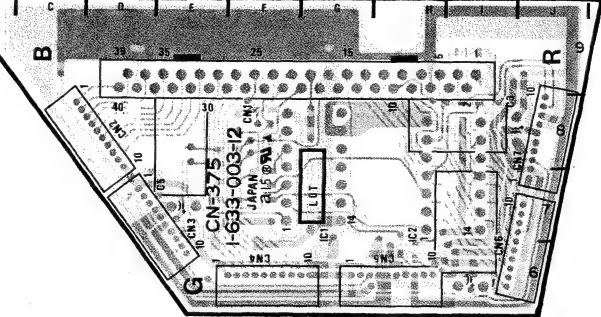


1-632-999-12
COMPONENT SIDE

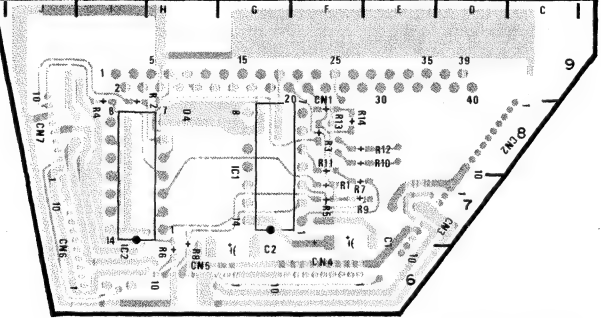


1-632-999-12
SOLDERING SIDE

CN-375 BOARD
Serial No. 10801 - (UC)
30601 - (J)
40901 - (AE)



1-633-003-12 COMPONENT SIDE

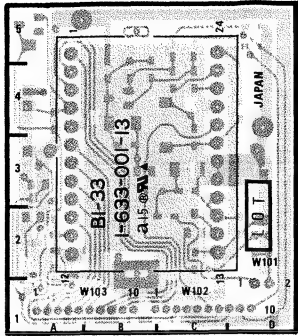


1-633-003-12 SOLDERING SIDE

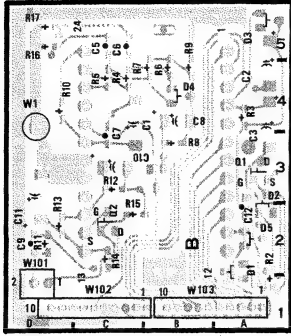
PA-102



BI-33 BOARD
Serial No. 11101 - (UC)
30801 - (J)
41301 - (AE)

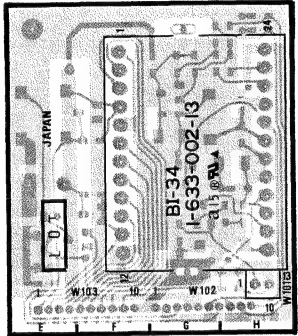


1-633-001-13
COMPONENT SIDE

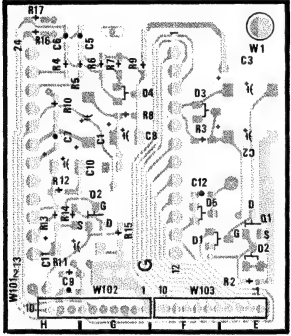


1-633-001-13
SOLDERING SIDE

BI-34 BOARD
Serial No. 11101 - (UC)
30801 - (J)
41301 - (AE)

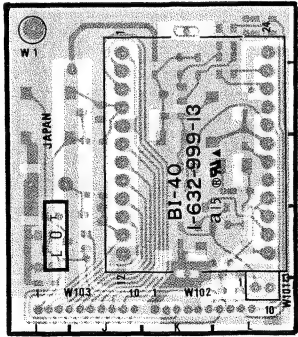


1-633-002-13
COMPONENT SIDE

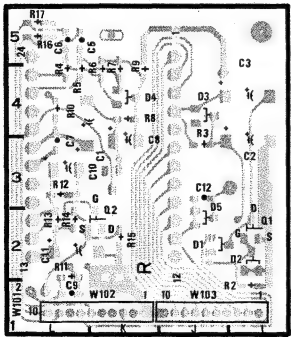


1-633-002-13
SOLDERING SIDE

BI-40 BOARD
Serial No. 11101 - (UC)
30801 - (J)
41301 - (AE)

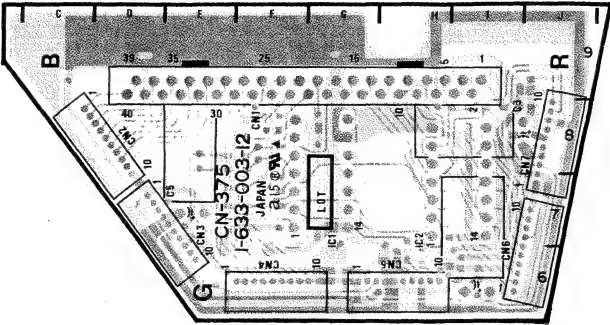


1-632-999-13
COMPONENT SIDE

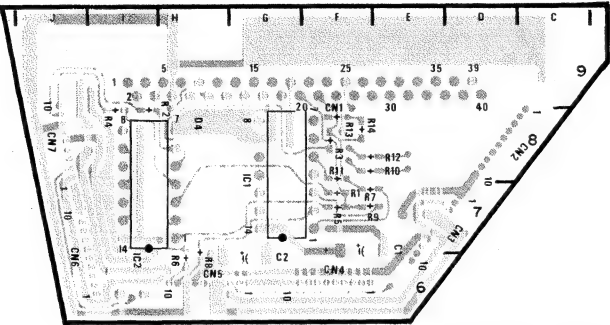


1-632-999-13

CN-375 BOARD
Serial No. 10801 - (UC)
30601 - (J)
40901 - (AE)

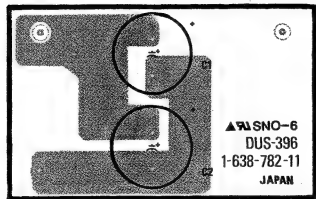


1-633-003-12 COMPONENT SIDE



1-633-003-12 SOLDERING SIDE

DUS-396 BOARD
Serial No. 11001 - (UC)
30701 - (J)
41201 - (AE)



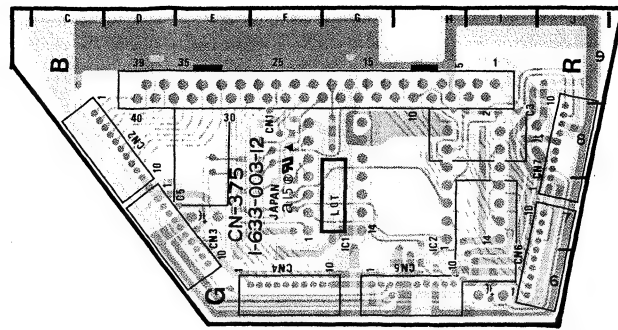
1-638-782-11 COMPONENT SIDE

PA-102

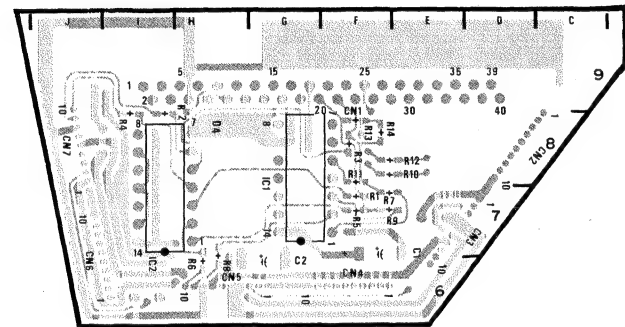


CN-375 BOARD

Serial No. 10801 - (UC)
30601 - (J)
40901 - (AE)



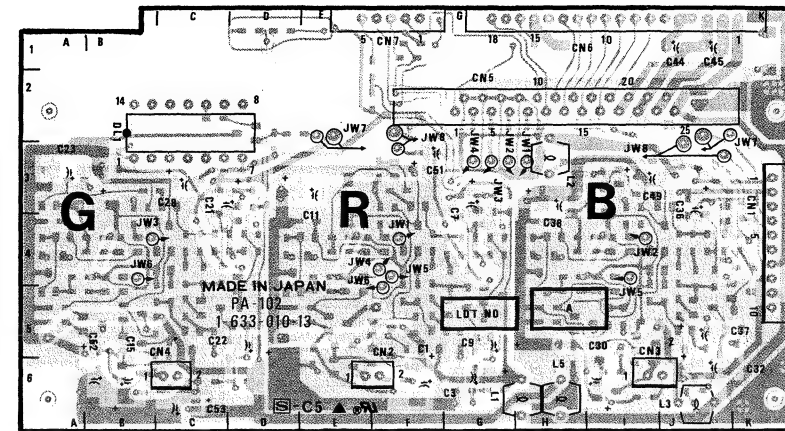
1-633-003-12 COMPONENT SIDE



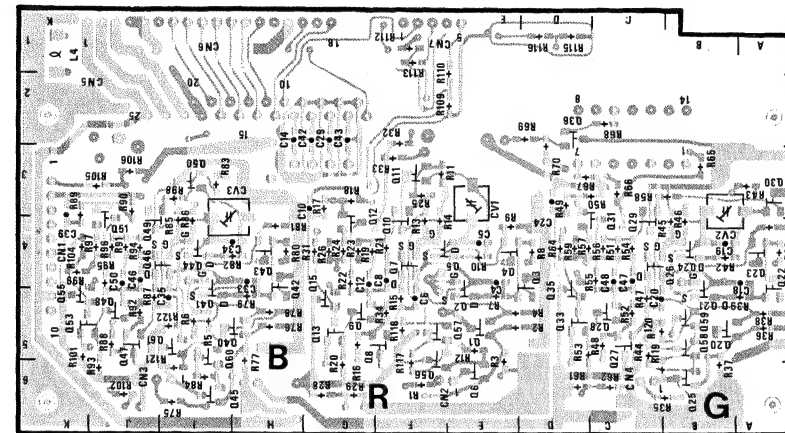
1-633-003-12 SOLDERING SIDE

PA-102 BOARD

Serial No. 10801 - (UC)
30601 - (J)
40901 - (AE)



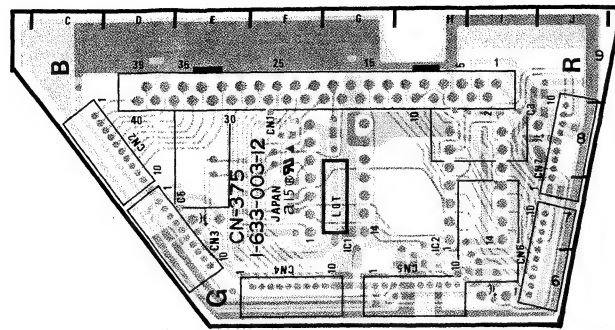
1-633-010-13 COMPONENT SIDE



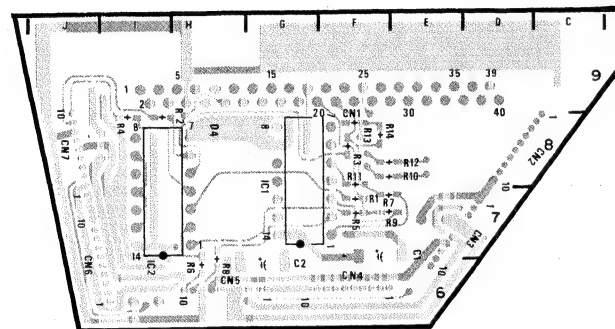
1-633-010-13 SOLDERING SIDE

CN-375 BOARD

Serial No. 10501 - 10800 (UC)
30401 - 30600 (J)
40501 - 40900 (AE)



1-633-003-12 COMPONENT SIDE

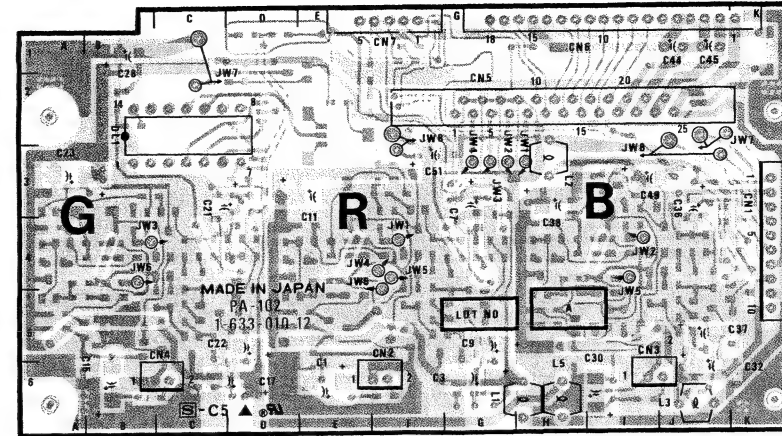


1-633-003-12 SOLDERING SIDE

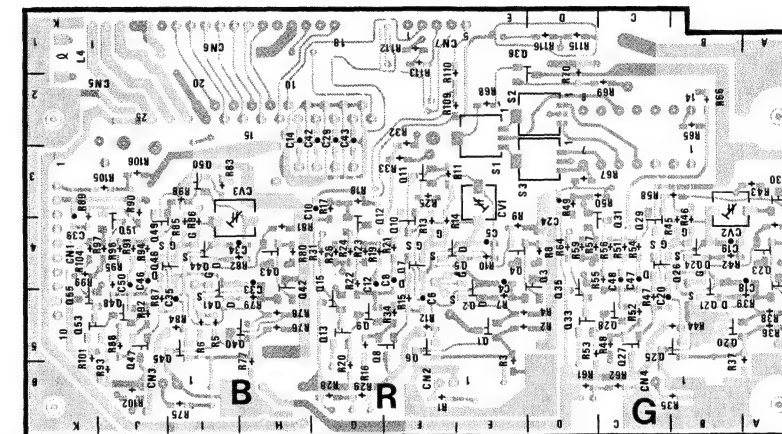
C-11 (b)

PA-102 BOARD

Serial No. 10501 - 10800 (UC)
30401 - 30600 (J)
40501 - 40900 (AE)



1-633-010-12 COMPONENT SIDE



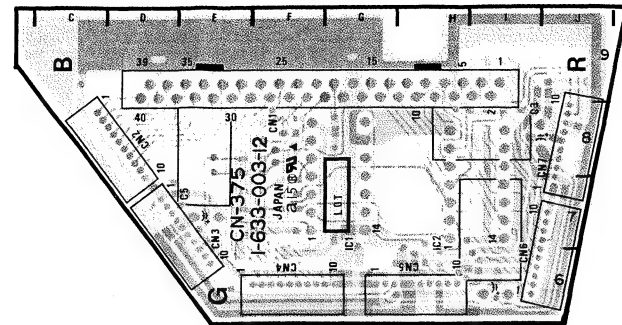
1-633-010-12 SOLDERING SIDE

C-12 (b)

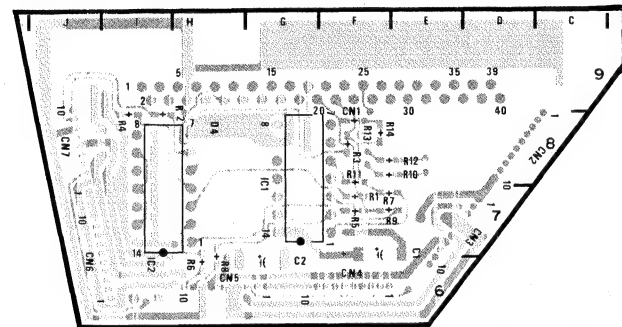
BVP-370/P

CN-375 BOARD

Serial No. 10801 -	(UC)
30601 -	(J)
40901 -	(AE)



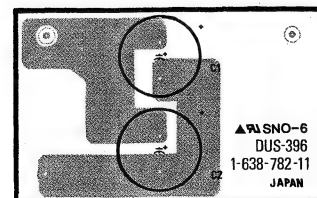
1-633-003-12 COMPONENT SIDE



1-633-003-12 SOLDERING SIDE

DUS-396 BOARD

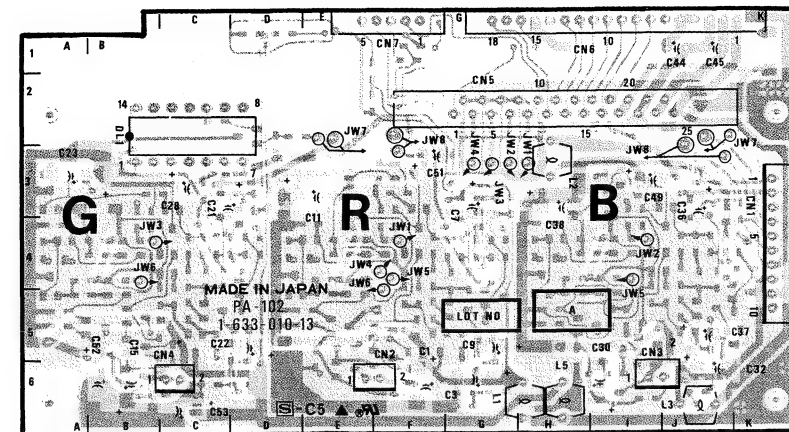
Serial No. 11001 -	(UC)
30701 -	(J)
41201 -	(AE)



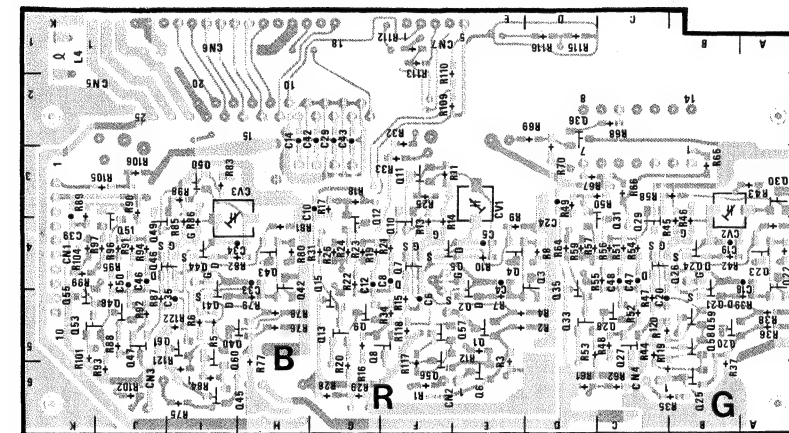
1-638-782-11 COMPONENT SIDE

PA-102 BOARD

Serial No. 10801 -	12010 (UC)
30601 -	31300 (J)
40901 -	42700 (AE)



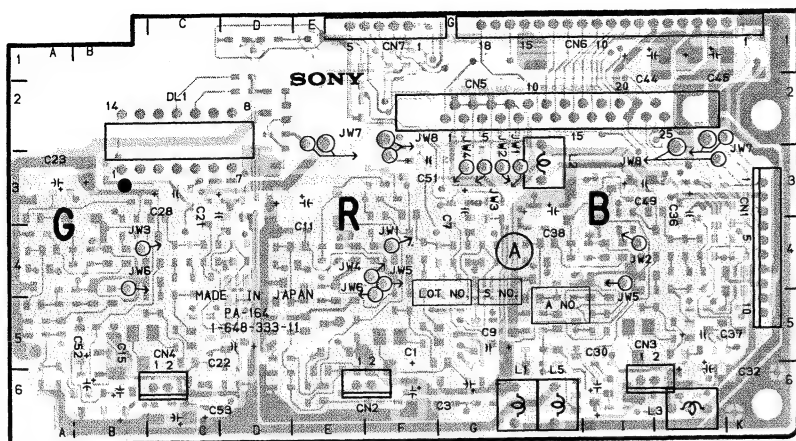
1-633-010-13 COMPONENT SIDE



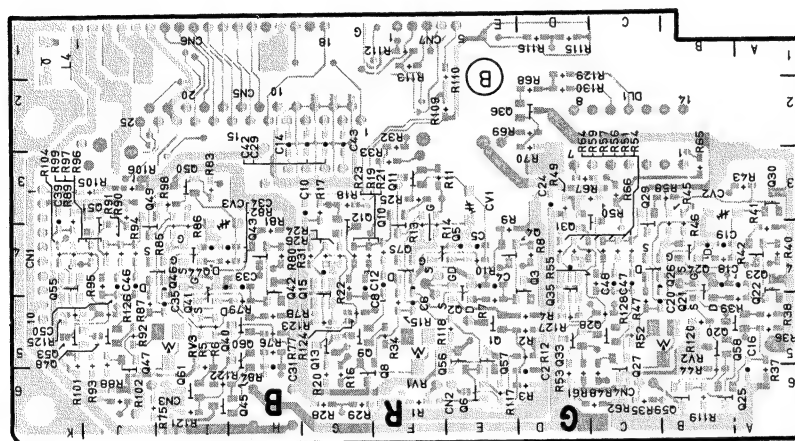
1-633-010-13 SOLDERING SIDE

PA-164A BOARD

Serial No. 31301 - (J)
42701 - (AE)



1-648-333-11 COMPONENT SIDE

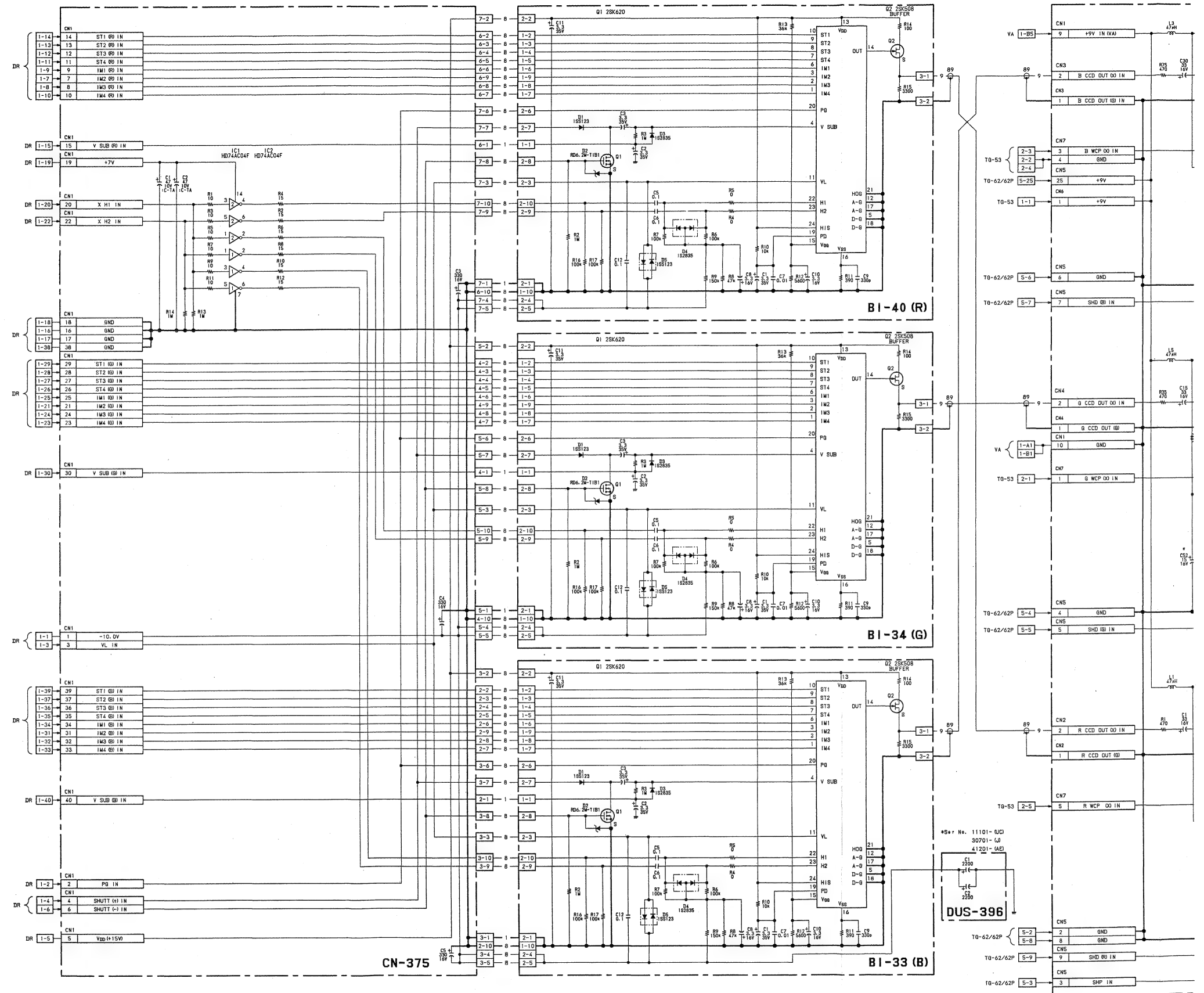


1-648-333-11 SOLDERING SIDE

CCD BLOCK (2/2)

BI-33 BOARD
BI-34 BOARD
BI-40 BOARD
CN-375 BOARD
DUS-396 BOARD
PA-102 BOARD

Serial No. 10001 - 12010 (UC)
30001 - 31300 (J)
40001 - 42700 (AE)



BVP-370/P

C-13 (a)

C-14 (a)

A

B

C

D

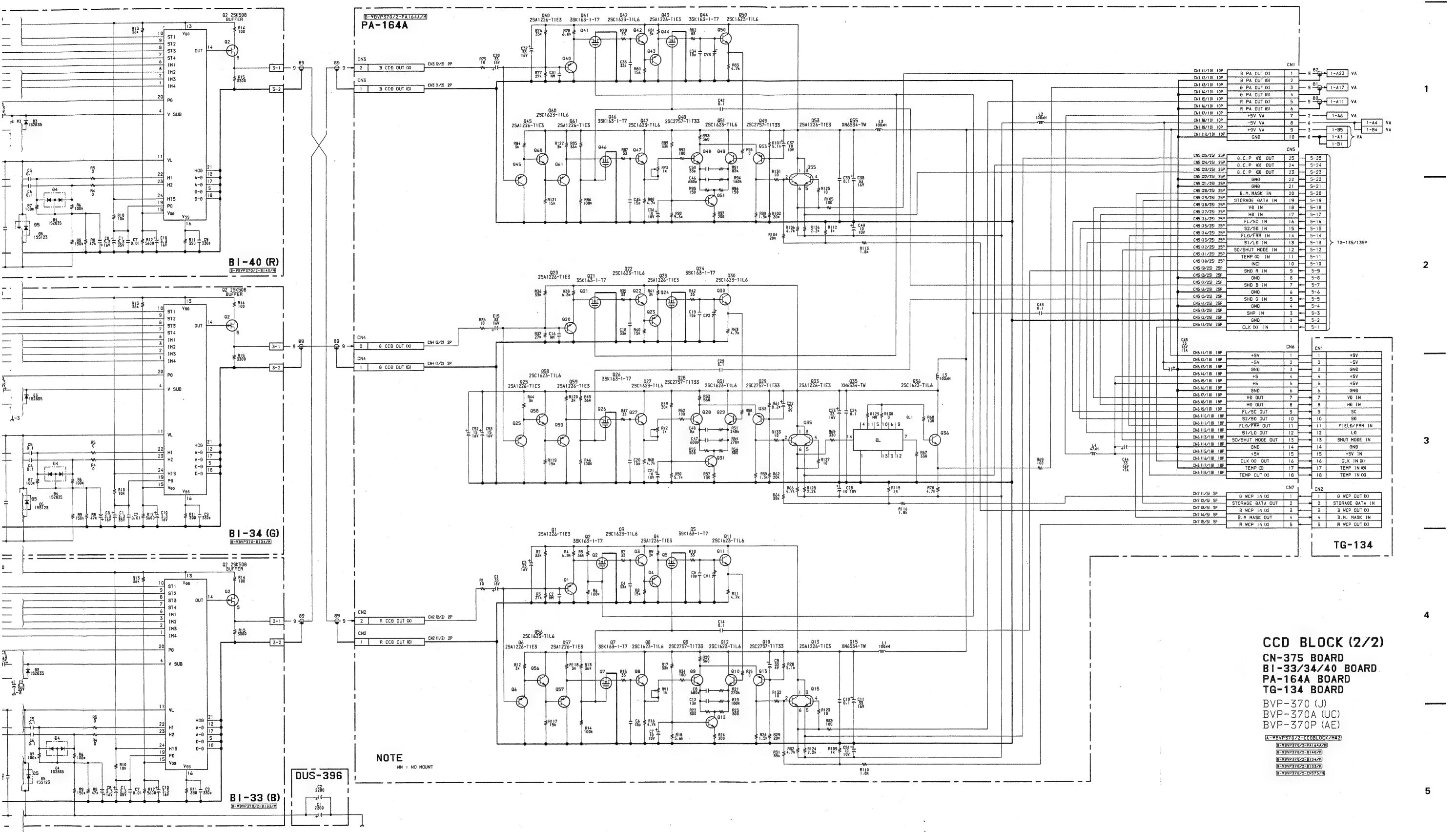
E

F

G

H

T



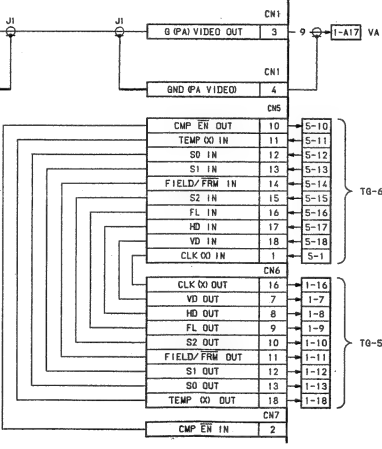
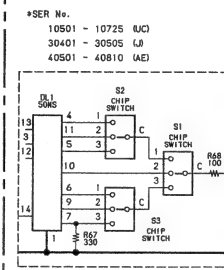
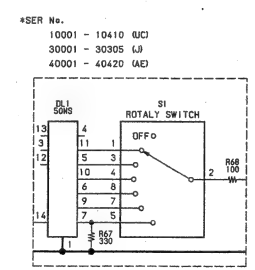
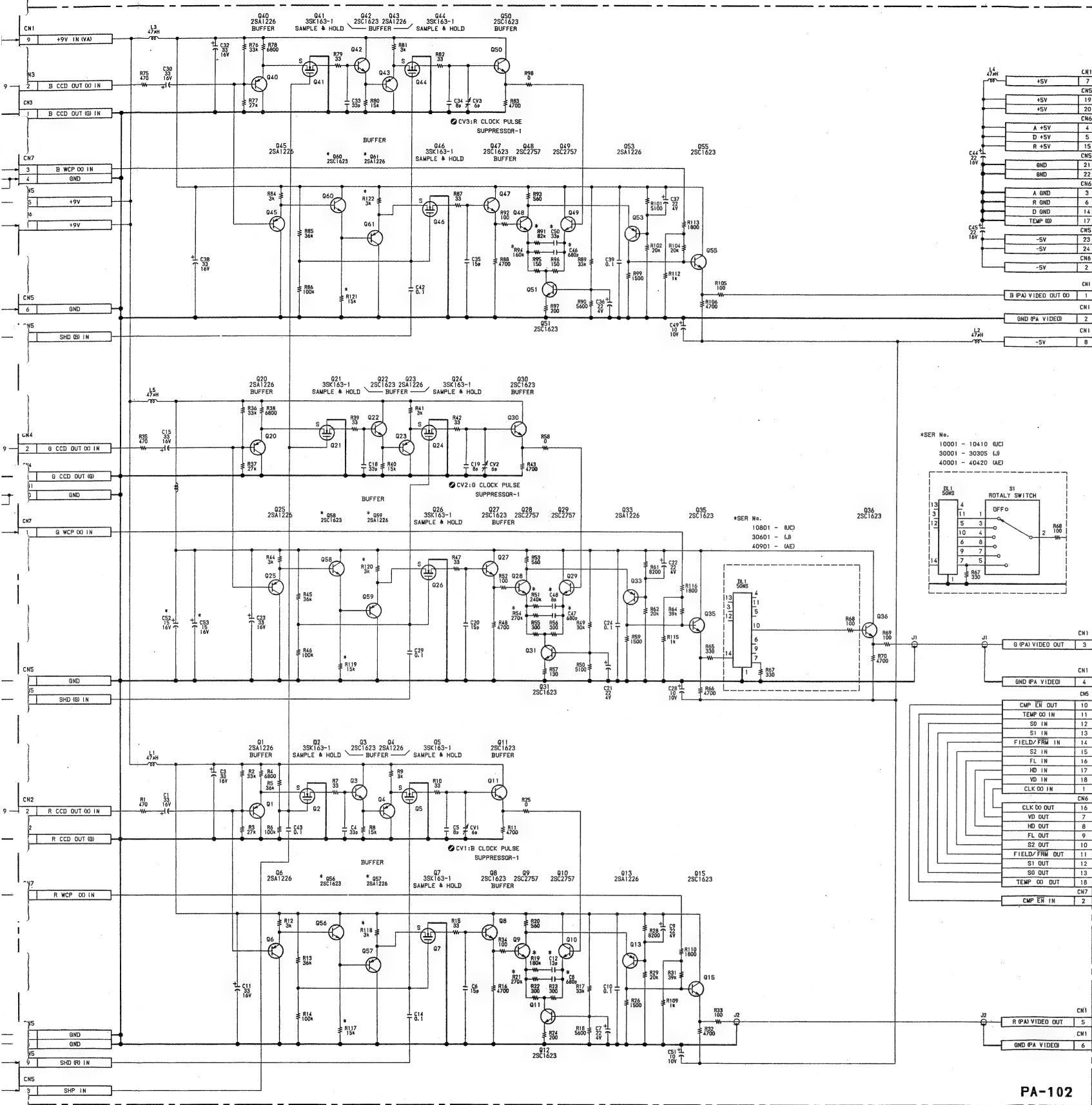
CCD BLOCK (2/2)
CN-375 BOARD
BI-33/34/40 BOARD
PA-164A BOARD
TG-134 BOARD
BVP-370 (J)
BVP-370A (UC)
BVP-370P (AE)

A-BVP370/2-CBBLCK/2
B-BVP370/2-B142/2
C-BVP370/2-B142/2
D-BVP370/2-B142/2
E-BVP370/2-B142/2

C-14 (b)

C-15 (b)

1
2
3
4
5



REF. NO.	CHANGE INFORMATION	SER. NO.
C8, 46	SP → 680P	10501 - (UC) 30401 - (LJ) 40601 - (AE)
C47		
C12	22P → 13P	
C48	22P → 8P	
C50	68P → 33P	
R21, 54	150K → 270K	10801 - (UC) 30601 - (LJ) 40901 - (AE)
R19	100K → 180K	
R51	100K → 240K	
R91	100K → 82K	
R94	150K → 160K	
C52, 53		10801 - (UC) 30601 - (LJ) 40901 - (AE)
Q56, 57		
S8, 59		
R117, 118		
119, 120		
C17	DELETE	
S1, 2, 3		

CCD BLOCK (2/2)
BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)

PA-102

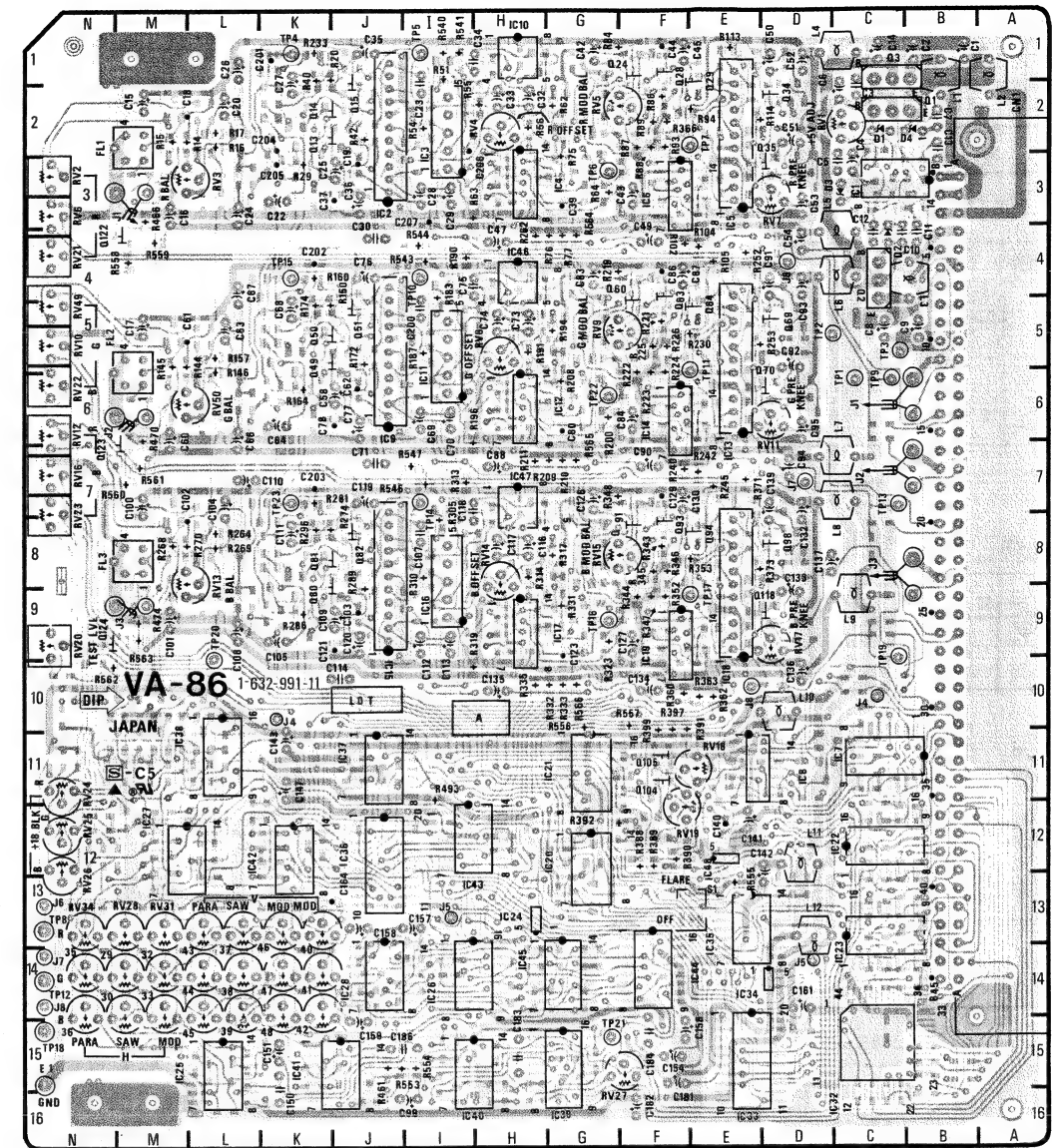
C-15 (a)

C-16 (a)

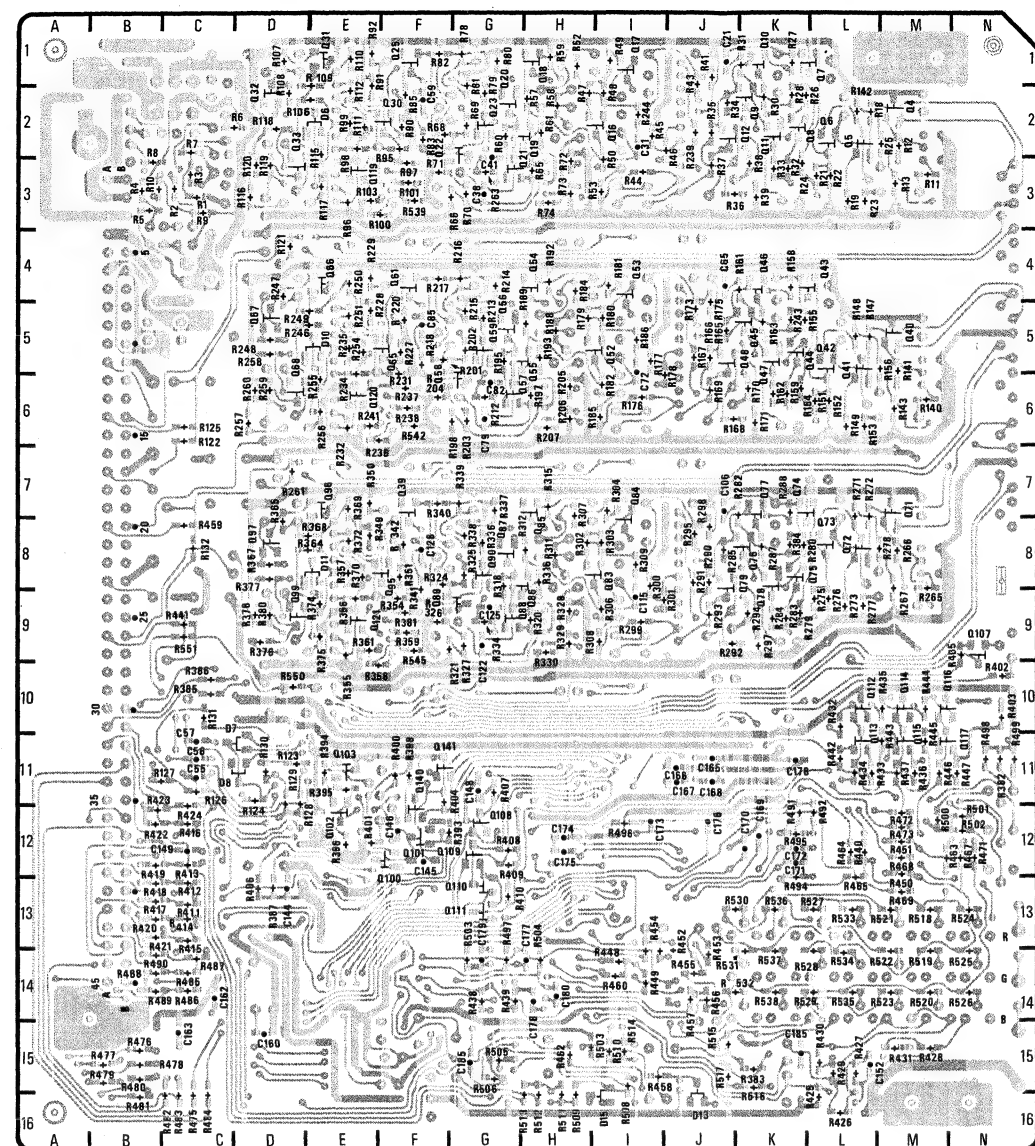
B-BVP370-CCD BLOCK/M#2

VA-86 BOARD

Serial No. 10001 - 10210 (UC)
30001 - 30205 (J)
40001 - 40210 (AE)



1-632-991-11 COMPONENT SIDE



1-632-991-11 SOLDERING SIDE

C-19 (a)

VA-86 1-632-991-11

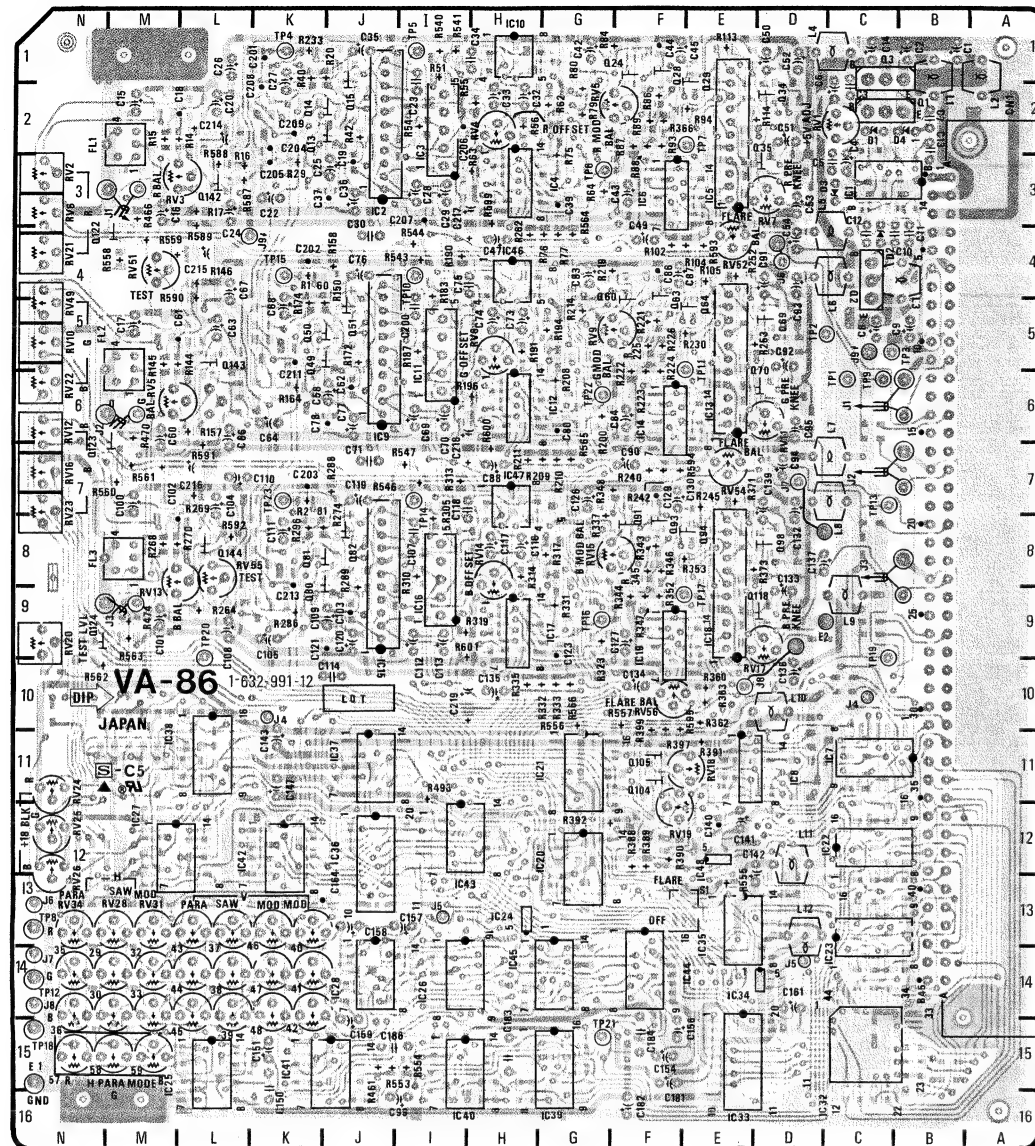
CN1	A-2	Q5	L-2	Q81	K-8	RV26	N-13
D1	C-2	Q6	L-2	Q82	J-8	RV27	G-16
D2	C-4	Q7	L-1	Q83	I-8	RV28	M-13
D3	D-3	Q8	K-2	Q84	I-7	RV29	N-14
D4	B-2	Q9	K-2	Q85	H-8	RV30	N-14
D6	E-2	Q10	K-1	Q86	H-9	RV31	M-13
D7	C-10	Q11	K-2	Q87	G-8	RV32	M-14
D8	C-11	Q12	K-2	Q88	G-9	RV33	M-14
D10	E-5	Q13	K-2	Q89	F-9	RV34	N-14
D11	E-8	Q14	K-2	Q90	G-8	RV35	N-14
D13	J-16	Q15	J-2	Q91	G-8	RV36	N-15
D15	I-16	Q16	I-2	Q93	F-8	RV37	L-14
		Q17	I-1	Q94	E-8	RV38	L-14
E1	N-15	Q18	H-1	Q95	F-8	RV39	L-15
FL1	N-2	Q19	H-2	Q96	E-7	RV40	K-14
FL2	N-5	Q20	G-1	Q97	D-8	RV41	K-14
FL3	N-8	Q21	G-3	Q98	D-8	RV42	K-15
		Q22	F-2	Q99	D-9	RV43	L-14
		Q23	G-2	Q100	F-13	RV44	L-14
IC1	C-3	Q24	F-1	Q101	F-12	RV45	M-15
IC2	J-3	Q25	F-1	Q102	E-12	RV46	K-13
IC3	I-2	Q28	F-1	Q103	E-11	RV47	K-14
IC4	G-3	Q29	E-2	Q104	F-11	RV48	K-15
IC5	E-3	Q30	F-2	Q105	F-11	RV49	N-5
IC6	F-3	Q31	E-1	Q107	N-9	RV50	L-6
IC7	C-11	Q32	D-2	Q108	G-12		
IC8	D-11	Q33	D-2	Q109	F-12	S1	E-13
IC9	J-6	Q34	D-2	Q110	G-13	TP1	C-6
IC10	H-1	Q35	D-2	Q111	G-13	TP2	D-5
IC11	I-6	Q39	F-7	Q112	L-10	TP3	C-5
IC12	G-6	Q40	M-5	Q113	L-11	TP4	K-1
IC13	E-7	Q41	L-5	Q114	M-10	TP5	I-1
IC14	F-6	Q42	L-5	Q115	M-11	TP6	G-3
IC15	J-10	Q43	L-4	Q116	M-10	TP7	E-2
IC16	I-8	Q44	K-5	Q117	N-11	TP8	N-13
IC17	G-9	Q45	K-5	Q118	D-9	TP9	C-6
IC18	E-10	Q46	K-4	Q119	E-3	TP10	I-4
IC19	F-9	Q47	K-5	Q120	E-9	TP11	E-5
IC20	G-12	Q48	K-5	Q121	E-9	TP12	N-14
IC21	G-11	Q49	K-5	Q122	N-4	TP13	C-7
IC22	C-12	Q50	K-5	Q123	N-7	TP14	I-7
IC23	C-14	Q51	J-5	Q124	N-9	TP15	K-4
IC24	H-13	Q52	I-5	Q140	F-11	TP16	G-9
IC25	M-15	Q53	I-4	Q141	F-11	TP17	E-9
IC26	I-14	Q54	H-4			TP18	N-15
IC27	M-12	Q55	H-5	RV1	D-2	TP19	C-9
IC28	J-14	Q56	G-5	RV2	N-3	TP20	L-9
IC32	D-16	Q57	G-6	RV3	L-3	TP21	G-15
IC33	E-15	Q58	F-5	RV4	H-2	TP22	G-6
IC34	E-14	Q59	G-5	RV5	G-2		
IC35	E-13	Q60	G-4	RV6	N-3		
IC36	J-12	Q61	F-4	RV7	D-3		
IC37	J-11	Q63	F-5	RV8	H-5		
IC38	M-11	Q64	E-5	RV9	G-5		
IC39	G-16	Q65	F-5	RV10	N-5		
IC40	I-6	Q66	E-4	RV11	D-7		
IC41	K-15	Q67	D-5	RV12	N-6		
IC42	L-12	Q68	D-5	RV13	L-8		
IC43	I-13	Q69	D-5	RV14	H-8		
IC44	E-14	Q70	D-6	RV15	G-8		
IC45	H-13	Q71	M-7	RV16	N-7		
IC46	H-4	Q72	L-8	RV17	D-9		
IC47	H-7	Q73	L-8	RV18	E-11		
IC48	E-12	Q74	K-7	RV19	F-12		
		Q75	L-8	RV20	N-9		
Q1	B-2	Q76	K-8	RV21	N-4		
Q2	C-4	Q77	K-7	RV22	N-6		
Q3	C-1	Q78	K-9	RV23	N-7		
Q4	M-2	Q79	K-8	RV24	N-11		
		Q80	K-9	RV25	N-12		

C-20 (a)

BVP-370/P

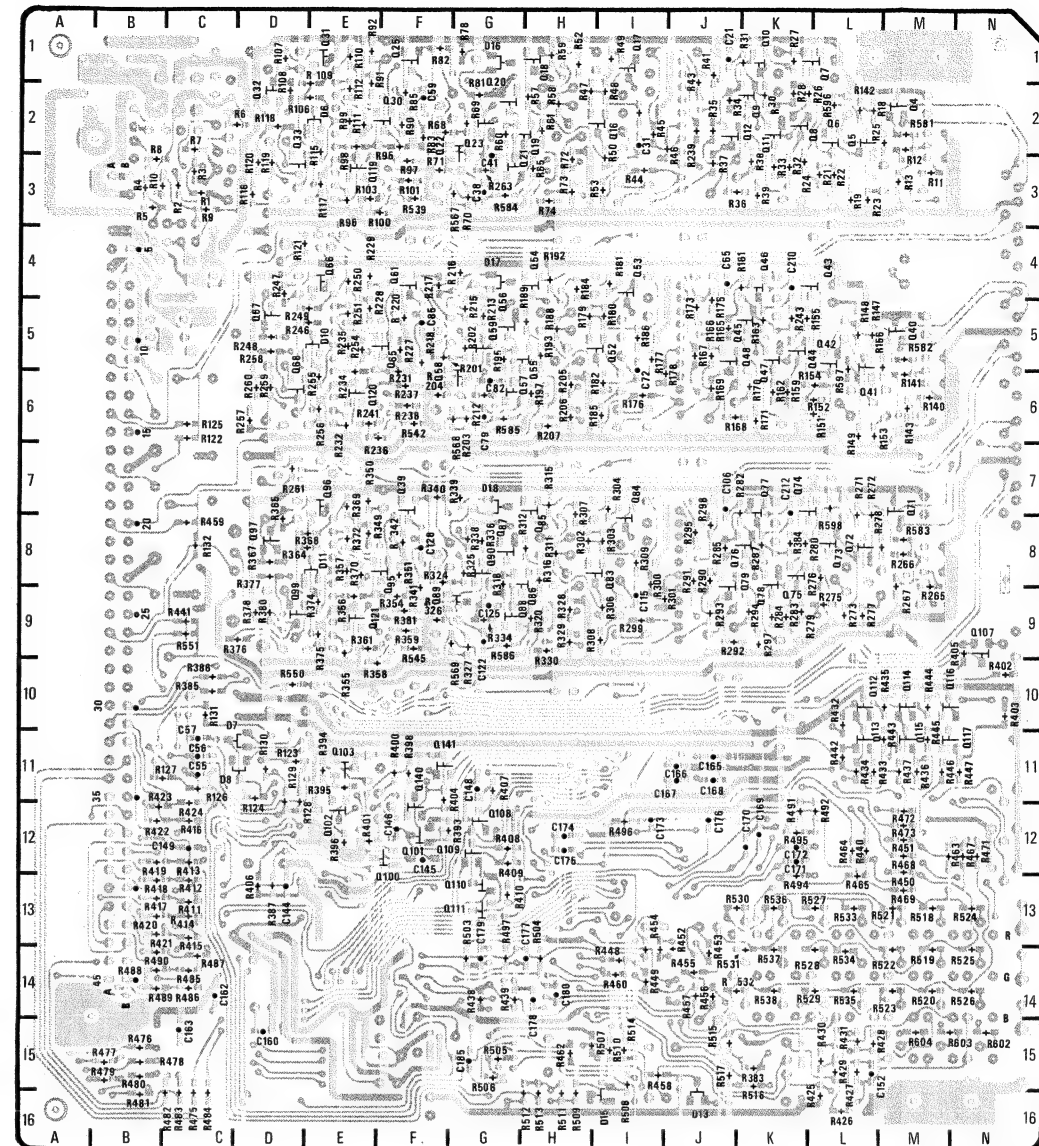
VA-86 BOARD

Serial No. 10001 - 10500 (UC)
30001 - 30400 (J)
40001 - 40600 (AE)



1-632-991-12 COMPONENT SIDE

C-18 (b)



1-632-991-12 SOLDERING SIDE

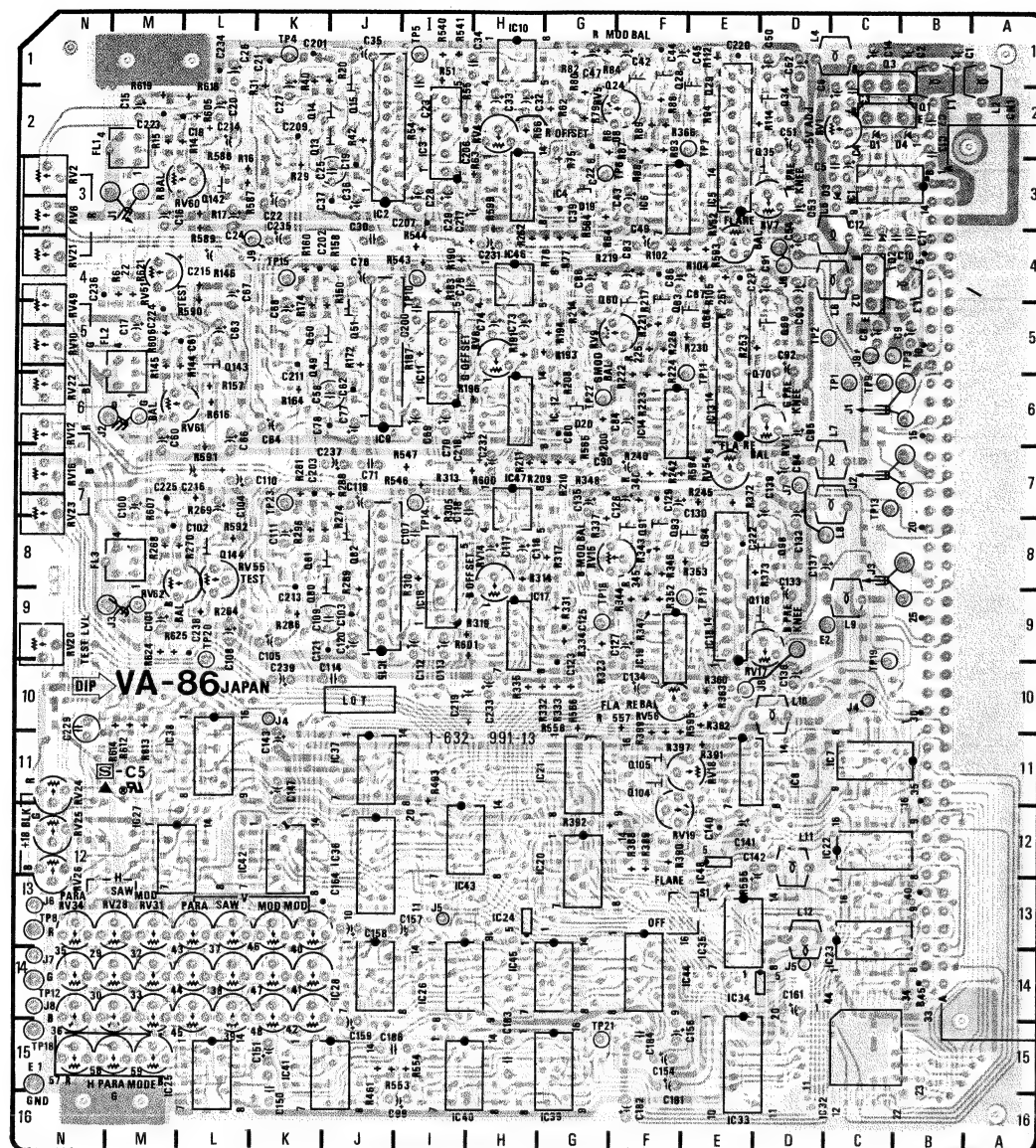
C-19 (b)

VA-86 1-6

CN1	/
D1	C
D2	C
D3	C
D4	E
D6	E
D7	E
D8	C
D10	E
D11	E
D13	J
D15	J
D16	C
D17	C
D18	C
E1	M
E2	C
FL1	M
FL2	M
FL3	M
IC1	C
IC2	C
IC3	J
IC4	E
IC5	E
IC6	F
IC7	C
IC8	D
IC9	J
IC10	J
IC11	J
IC12	C
IC13	E
IC14	F
IC15	J
IC16	J
IC17	C
IC18	E
IC19	F
IC20	C
IC21	C
IC22	C
IC23	C
IC24	F
IC25	M
IC26	J
IC27	M
IC28	C
IC32	C
IC33	E
IC34	E
IC35	E
IC36	C
IC37	C
IC38	M
IC39	C
IC40	J
IC41	F
IC42	L
IC43	F
IC44	E
IC45	F
IC46	F
IC47	F
IC48	E

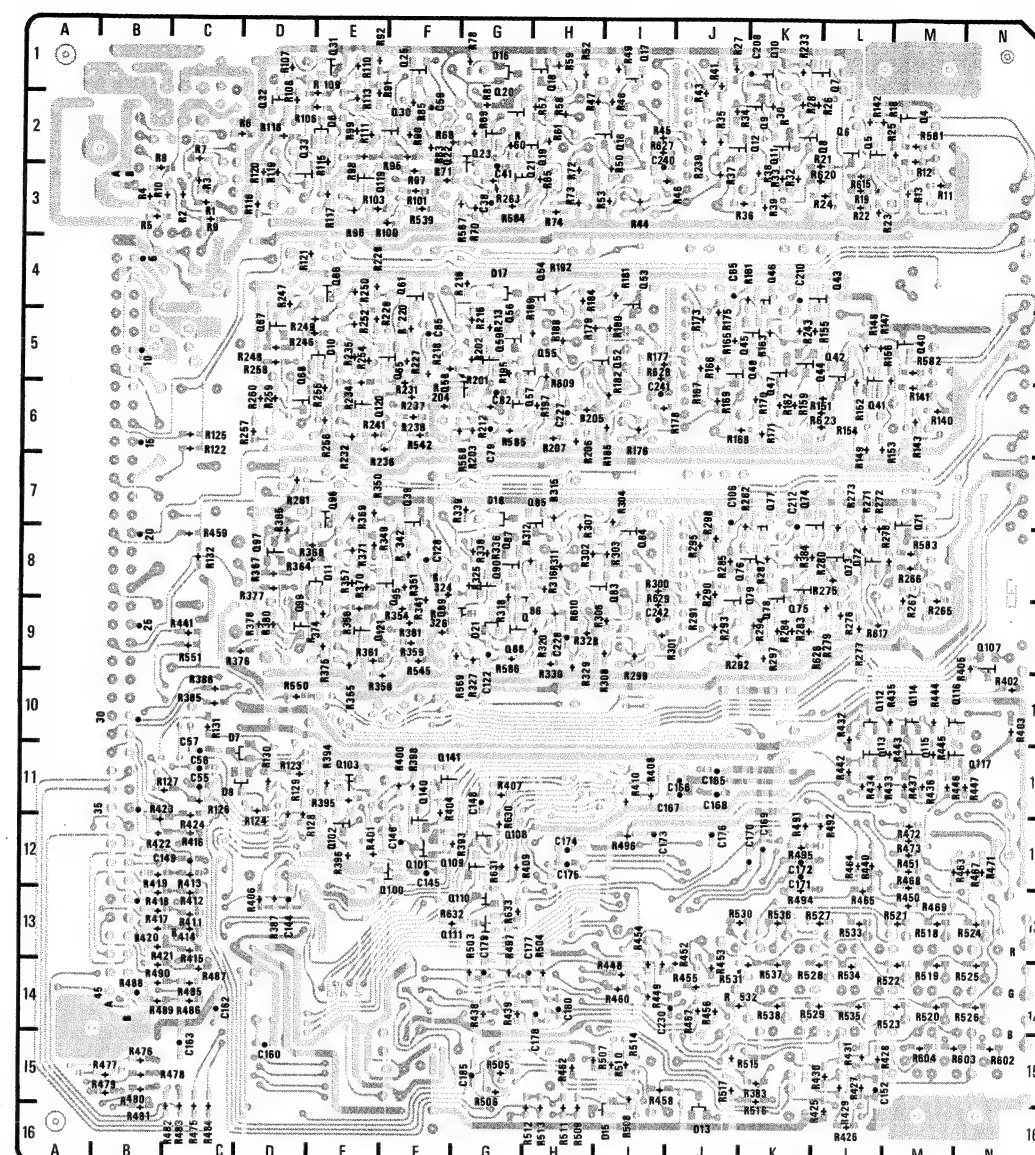
VA-86 BOARD

Serial No. 10501 - 10800 (UC)
30401 - 30600 (J)
40601 - 40900 (AE)



1-632-991-13 COMPONENT SIDE

C-18 (c)



1-632-991-13 SOLDERING SIDE

C-19 (c)

VA-86 1-

CN1

D1
D2
D3
D4
D6
D7
D8
D10
D11
D13
D15
D16
D17
D18
D19

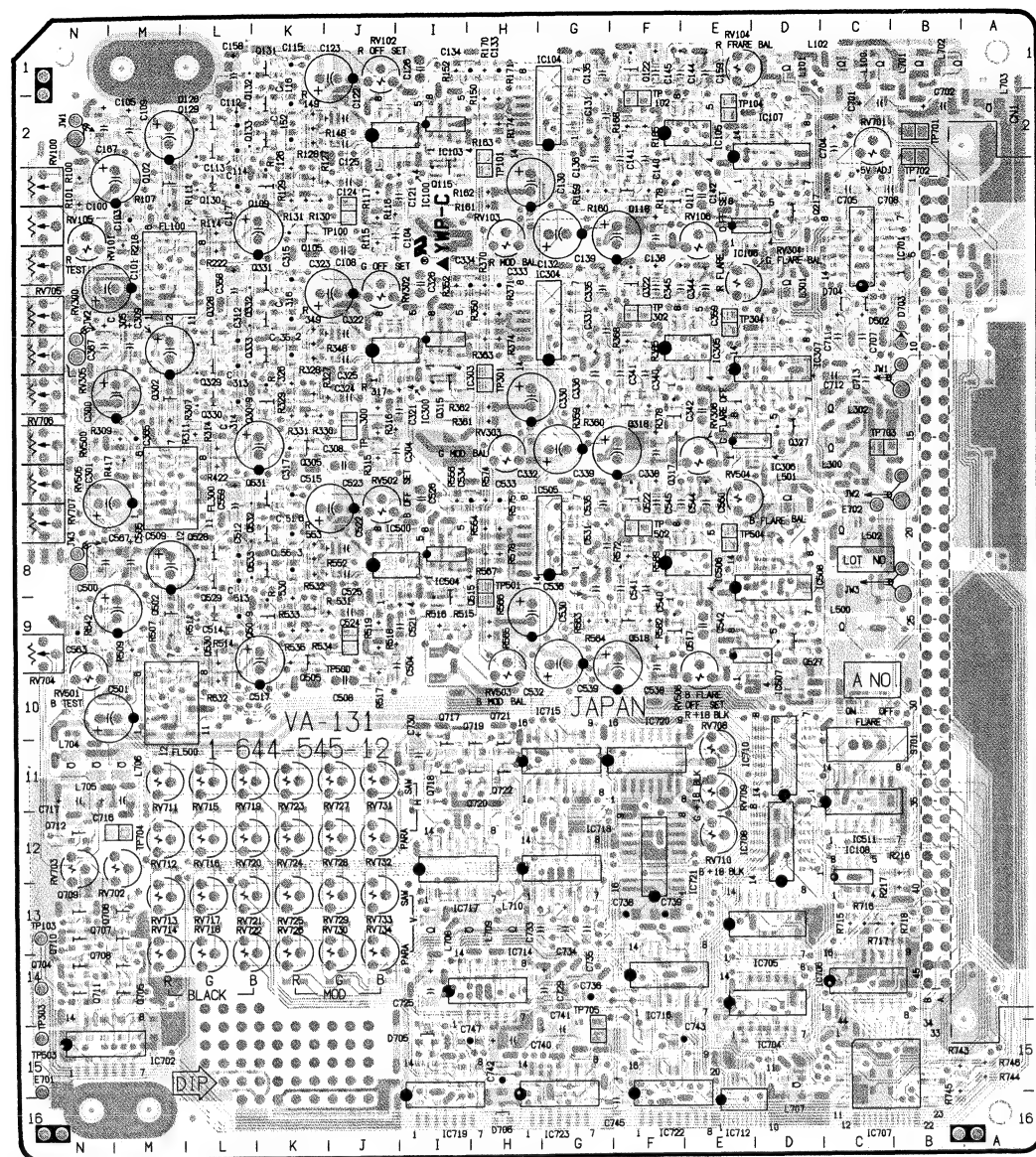
E1
E2

FL1
FL2
FL3

IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
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IC48

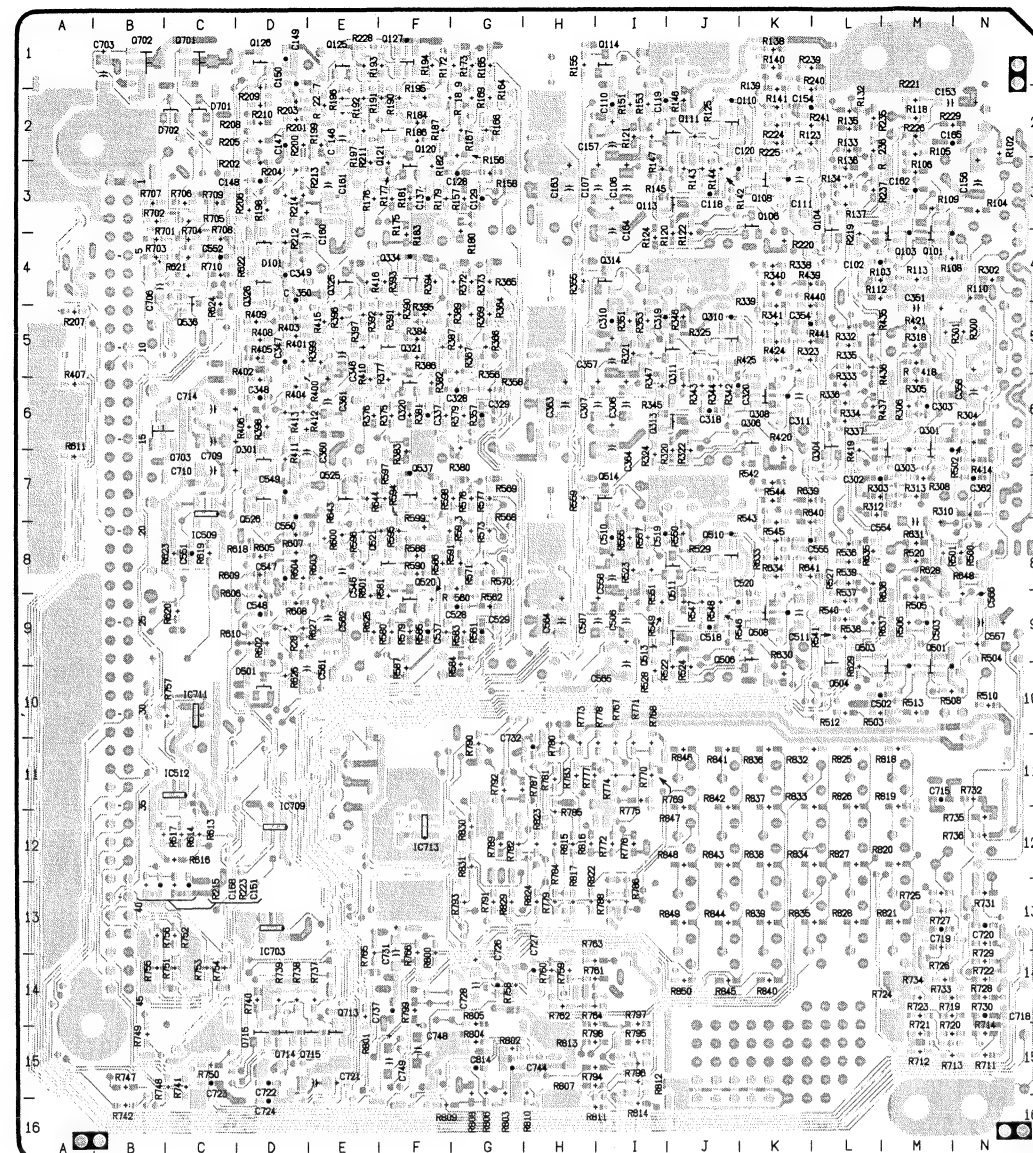
VA-131A BOARD

Serial No. 31301 - (J)
42701 - (AE)



1-644-545-12 COMPONENT SIDE

C-18 (f)



1-644-545-12 SOLDERING SIDE

C-19 (f)

VA-131 1

*Solderin

CN1 A

*D101 C

*D301 C

*D501 C

D502 C

*D701 C

*D702 C

D703 E

D704 C

D705 I-

D706 F

E701 N

E702 C

FL100 M

FL300 L

FL500 L

IC100 I-

IC103 I-

IC104 G

IC105 E

IC106 E

IC107 D

IC108 C

IC300 I-

IC303 H

IC304 G

IC305 E

IC306 D

IC307 D

IC500 I-

IC504 I-

IC505 G

IC506 E

IC507 D

IC508 D

*IC509 C

IC511 C

*IC512 C

IC701 B

IC702 M

*IC703 D

IC704 D

IC705 D

IC706 D

IC707 C

IC708 E-

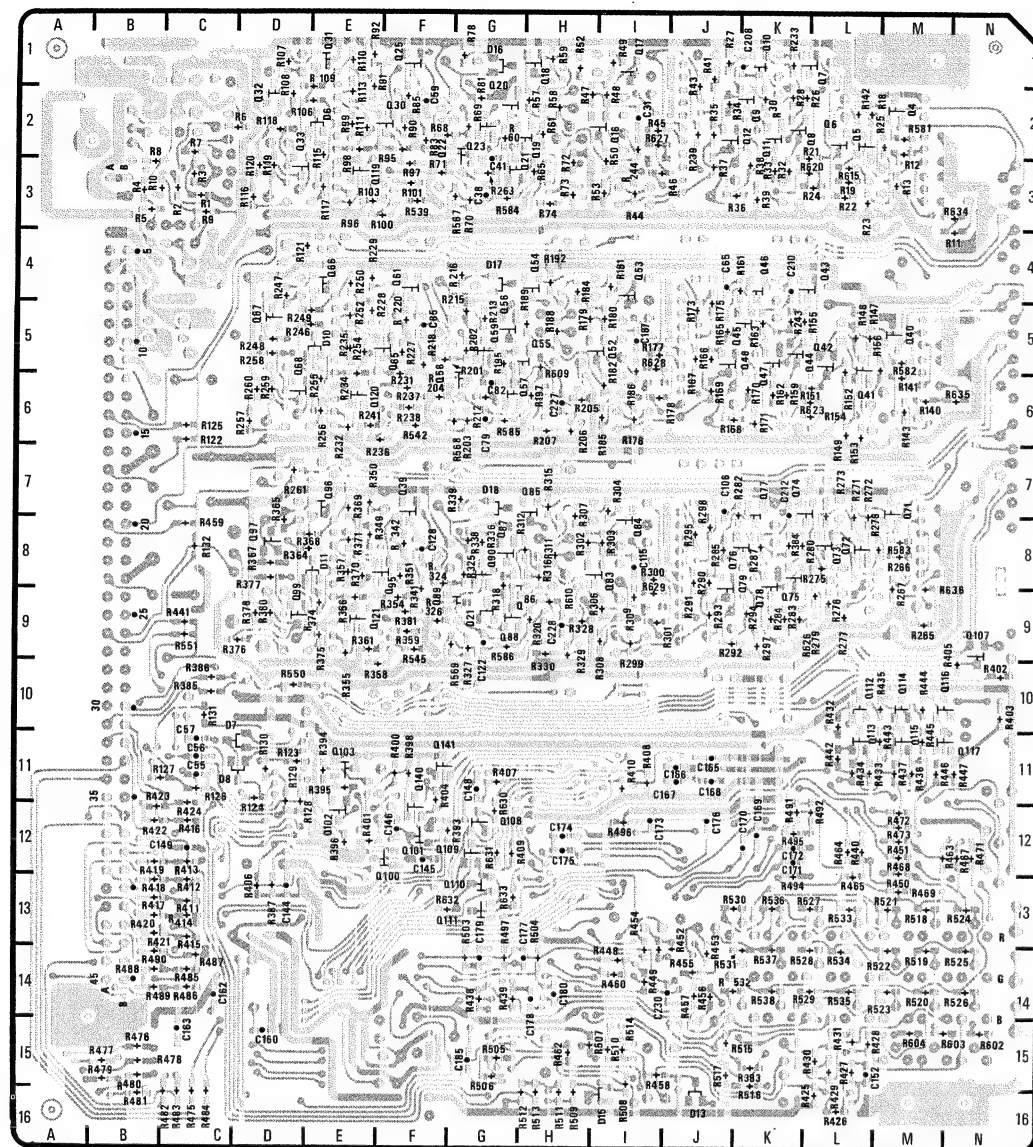
*IC709 D

IC710 E-

*IC711 C

IC712 E-

*IC713 F-



1-632-991-15 SOLDERING SIDE

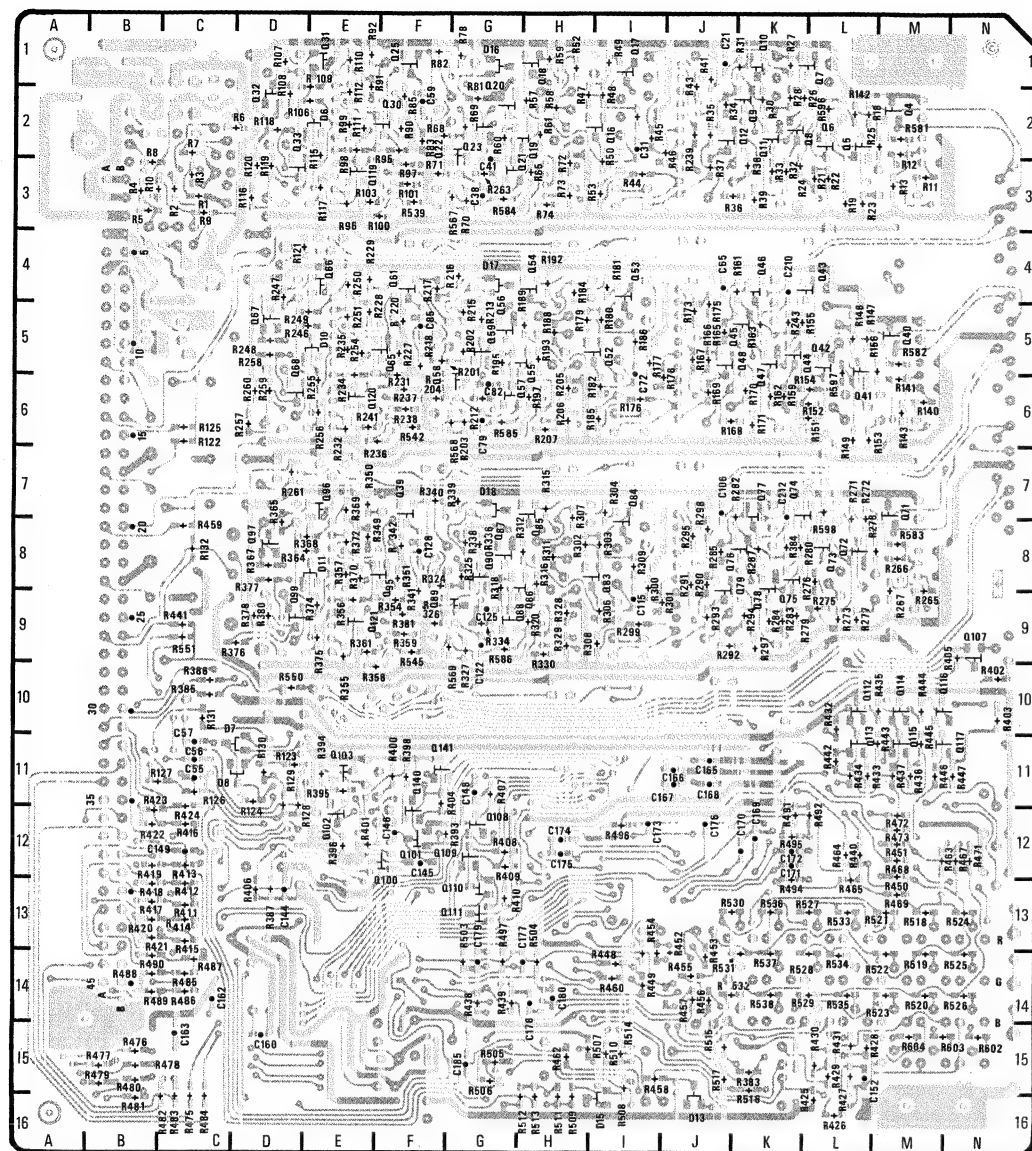
C-19 (e)

VA-86 1-632-991-15

CN1	A-2	Q1	B-2	Q81	K-8	RV31	M-13
D1	C-2	Q3	C-1	Q82	J-8	RV32	M-14
D2	C-4	Q4	M-2	Q83	I-8	RV33	M-14
D3	D-3	Q5	L-2	Q84	I-8	RV34	N-13
D4	B-2	Q6	L-2	Q85	H-7	RV35	N-14
D6	E-2	Q7	L-1	Q86	H-9	RV36	N-15
D7	D-11	Q8	L-2	Q87	G-8	RV37	L-14
D8	C-11	Q9	K-2	Q88	G-9	RV38	L-14
D10	E-5	Q10	K-1	Q89	F-9	RV39	L-15
D11	E-8	Q11	K-2	Q90	G-8	RV40	K-14
D13	J-16	Q12	K-2	Q91	F-8	RV41	K-14
D15	I-16	Q13	K-2	Q93	F-8	RV42	K-15
D16	G-1	Q14	K-2	Q94	E-8	RV43	L-14
D17	G-4	Q15	J-2	Q95	F-8	RV44	L-14
D18	G-7	Q16	I-2	Q96	E-7	RV45	L-15
D19	G-3	Q17	I-1	Q97	D-8	RV46	K-14
D20	G-6	Q18	H-1	Q98	D-8	RV47	K-14
D21	G-9	Q19	H-2	Q99	D-9	RV48	K-15
E1	N-15	Q20	G-1	Q100	F-13	RV49	N-5
E2	C-9	Q21	H-3	Q101	F-12	RV51	M-4
FL1	N-2	Q22	F-2	Q102	E-12	RV52	E-3
FL2	N-6	Q23	G-2	Q103	E-11	RV54	E-7
FL3	N-8	Q24	G-1	Q104	F-11	RV55	K-8
IC1	C-3	Q25	F-1	Q105	F-11	RV56	F-10
IC2	J-3	Q28	F-1	Q107	N-9	RV57	N-15
IC3	I-3	Q29	E-1	Q108	G-12	RV58	N-15
IC4	G-3	Q30	F-2	Q109	G-12	RV59	M-15
IC5	E-3	Q31	E-1	Q110	G-13	RV60	L-3
IC6	F-3	Q32	D-2	Q111	G-13	RV61	M-6
IC7	C-11	Q33	D-2	Q112	L-10	RV62	M-9
IC8	D-11	Q34	D-2	Q113	L-11		
IC9	J-6	Q35	D-2	Q114	M-10	S1	E-13
IC10	H-1	Q39	F-7	Q115	M-11		
IC11	I-6	Q40	M-5	Q116	M-10	TP1	C-6
IC12	G-6	Q41	L-6	Q117	N-11	TP2	D-5
IC13	E-6	Q42	L-5	Q118	D-9	TP3	B-5
IC14	F-6	Q43	L-4	Q119	E-3	TP4	K-1
IC15	J-10	Q44	L-5	Q120	E-6	TP5	I-1
IC16	I-9	Q45	K-5	Q121	E-9	TP6	F-3
IC17	G-9	Q46	K-4	Q140	F-11	TP7	E-2
IC18	E-9	Q47	K-6	Q141	F-11	TP8	N-13
IC19	F-9	Q48	K-5	Q142	L-3	TP9	C-6
IC20	G-12	Q49	K-5	Q143	L-5	TP10	I-4
IC21	G-11	Q50	K-5	Q144	L-8	TP11	E-5
IC22	C-12	Q51	J-5			TP12	N-14
IC23	C-14	Q52	I-5	RV1	D-2	TP13	C-7
IC24	H-13	Q53	I-4	RV2	N-3	TP14	I-7
IC25	M-15	Q54	H-4	RV4	H-2	TP15	K-4
IC26	I-14	Q55	H-5	RV5	G-2	TP16	G-9
IC27	M-12	Q56	G-5	RV6	N-3	TP17	E-9
IC28	J-14	Q57	H-6	RV7	D-3	TP18	N-15
IC32	C-16	Q58	F-6	RV8	H-5	TP19	C-10
IC33	E-16	Q59	G-5	RV9	G-5	TP20	L-9
IC34	E-14	Q60	G-4	RV10	N-5	TP21	G-15
IC35	E-13	Q61	F-4	RV11	D-6	TP22	G-6
IC36	J-12	Q63	F-4	RV12	N-6	TP23	K-7
IC37	J-11	Q65	F-5	RV14	H-8		
IC38	M-11	Q66	E-4	RV15	G-8		
IC39	G-16	Q67	D-5	RV16	N-7		
IC40	H-16	Q68	D-5	RV17	D-10		
IC41	K-15	Q69	D-5	RV18	E-11		
IC42	L-12	Q70	D-5	RV19	E-12		
IC43	H-13	Q71	M-7	RV20	N-9		
IC44	E-14	Q72	L-8	RV21	N-4		
IC45	H-14	Q73	L-8	RV22	N-6		
IC46	H-4	Q74	K-7	RV23	N-7		
IC47	H-7	Q75	K-9	RV24	N-11		
IC48	E-12	Q76	K-8	RV25	N-12		
		Q77	K-7	RV26	N-13		
		Q78	K-9	RV28	M-13		
		Q79	K-8	RV29	N-14		
		Q80	K-9	RV30	N-14		

C-20 (e)

BVP-370/P



1-632-991-12 SOLDERING SIDE

C-19 (b)

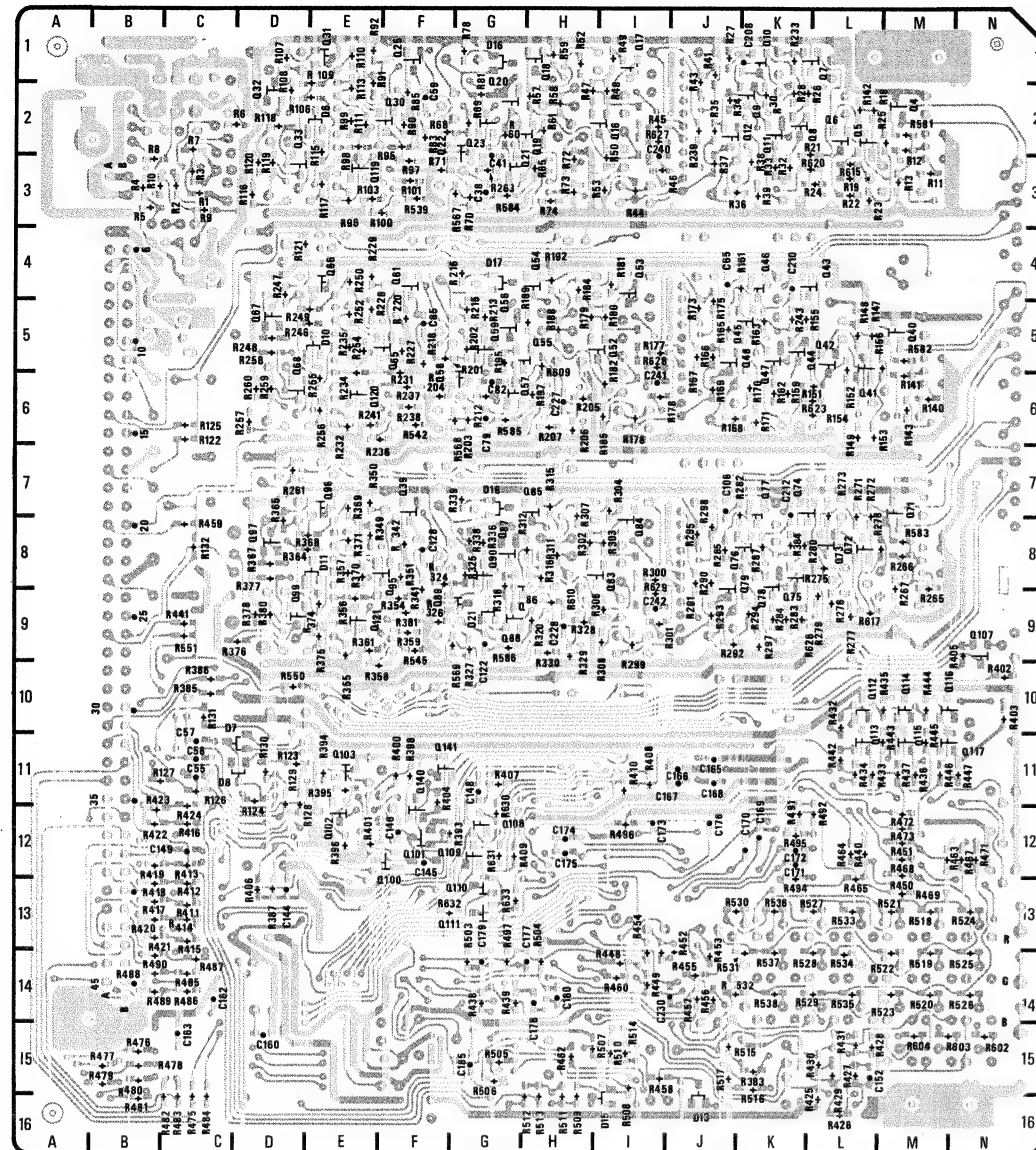
VA-86 1-632-991-12

CN1	A-2	Q1	B-2	Q77	K-7	RV22	N-6
D1	C-2	Q2	C-4	Q78	K-9	RV23	N-7
D2	C-4	Q3	C-1	Q79	K-8	RV24	N-11
D3	D-3	Q4	M-2	Q80	K-8	RV25	N-12
D4	B-2	Q5	L-2	Q81	K-8	RV26	N-12
D6	E-2	Q6	L-2	Q82	J-8	RV28	M-13
D7	D-10	Q7	L-1	Q83	I-8	RV29	N-14
D8	C-11	Q8	K-2	Q84	I-7	RV30	N-14
D10	E-5	Q9	K-2	Q85	H-8	RV31	M-13
D11	E-8	Q10	K-1	Q86	H-9	RV32	M-14
D13	J-16	Q11	K-2	Q87	G-8	RV33	M-14
D15	I-16	Q12	K-2	Q88	G-9	RV34	N-13
D16	G-1	Q13	K-2	Q89	F-9	RV35	N-14
D17	G-4	Q14	K-2	Q90	G-8	RV36	N-15
D18	G-7	Q15	J-2	Q91	F-8	RV37	L-13
		Q16	I-2	Q93	F-8	RV38	L-14
		Q17	I-1	Q94	E-8	RV39	L-15
E1	N-15	Q18	H-1	Q95	F-8	RV40	K-13
E2	C-9	Q19	H-2	Q96	E-7	RV41	K-14
		Q20	G-2	Q97	D-8	RV42	K-15
FL1	N-2	Q21	G-3	Q98	D-8	RV43	L-13
FL2	N-5	Q22	F-2	Q99	D-9	RV44	L-14
FL3	N-8	Q23	G-2	Q100	F-12	RV45	L-15
		Q24	F-1	Q101	F-12	RV46	K-13
IC1	C-3	Q25	F-1	Q102	E-12	RV47	K-14
IC2	J-3	Q28	F-1	Q103	E-11	RV48	K-15
IC3	I-2	Q29	E-1	Q104	F-11	RV49	N-5
IC4	G-3	Q30	F-2	Q105	F-11	RV50	L-6
IC5	E-3	Q31	E-1	Q107	N-9	RV51	M-4
IC6	F-3	Q32	D-2	Q108	G-12	RV52	E-4
IC7	C-11	Q33	D-2	Q109	F-12	RV54	E-7
IC8	D-11	Q34	D-2	Q110	G-13	RV55	L-8
IC9	J-6	Q35	D-2	Q111	G-13	RV56	F-10
IC10	H-1	Q39	F-7	Q112	L-10	RV57	N-15
IC11	I-5	Q40	M-5	Q113	L-11	RV58	N-15
IC12	G-6	Q41	L-6	Q114	M-10	RV59	M-15
IC13	E-6	Q42	L-5	Q115	M-11		
IC14	F-6	Q43	L-4	Q116	M-10	S1	E-13
IC15	J-10	Q44	K-5	Q117	N-11		
IC16	I-9	Q45	K-5	Q118	D-9	TP1	C-6
IC17	G-9	Q46	K-4	Q119	E-3	TP2	D-5
IC18	E-9	Q47	K-5	Q120	E-6	TP3	B-5
IC19	F-9	Q48	K-5	Q121	E-9	TP4	K-1
IC20	G-12	Q49	K-5	Q140	F-11	TP5	I-1
IC21	G-11	Q50	K-5	Q141	F-11	TP6	G-3
IC22	C-12	Q51	J-5	Q142	L-3	TP7	E-2
IC23	C-13	Q52	I-5	Q143	L-5	TP8	N-13
IC24	H-13	Q53	I-4	Q144	L-8	TP9	C-6
IC25	M-15	Q54	H-4			TP10	I-4
IC26	I-14	Q55	H-5			TP11	E-5
IC27	M-12	Q56	G-5	RV1	D-2	TP12	N-14
IC28	J-14	Q57	G-6	RV2	N-3	TP13	C-7
IC32	C-16	Q58	F-6	RV3	M-3	TP14	I-7
IC33	E-15	Q59	G-5	RV4	H-2	TP15	K-4
IC34	E-14	Q60	G-4	RV5	G-2	TP16	G-9
IC35	E-13	Q61	F-4	RV6	N-3	TP17	E-9
IC36	J-12	Q63	F-4	RV7	D-3	TP18	N-15
IC37	J-11	Q64	E-5	RV8	H-5	TP19	C-10
IC38	M-11	Q65	F-5	RV9	G-5	TP20	L-9
IC39	G-16	Q66	E-4	RV10	N-5	TP21	G-15
IC40	I-6	Q67	D-5	RV11	D-6	TP22	G-6
IC41	K-15	Q68	D-6	RV12	N-6	TP23	K-7
IC42	L-12	Q69	D-5	RV13	M-9		
IC43	H-13	Q70	D-6	RV14	H-8		
IC44	E-14	Q71	M-7	RV15	G-8		
IC45	H-14	Q72	L-8	RV16	N-7		
IC46	H-4	Q73	L-8	RV17	D-10		
IC47	H-7	Q74	K-7	RV18	E-11		
IC48	E-12	Q75	K-9	RV19	F-12		
		Q76	J-8	RV20	N-9		
				RV21	N-4		

C-20 (b)

BVP-370/P

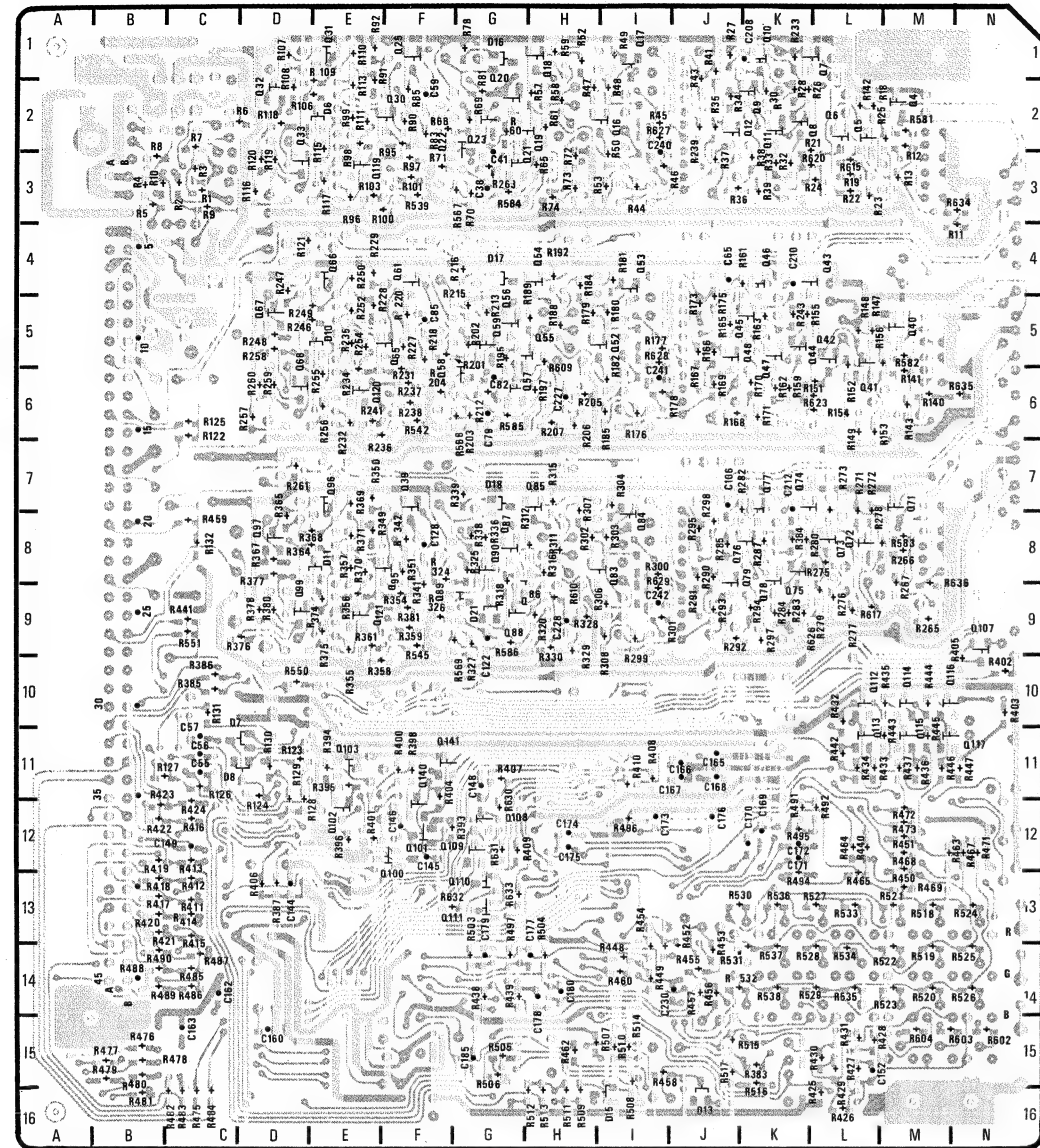
VA-86 1-632-991-13



1-632-991-13 SOLDERING SIDE

CN1	A-2	Q1	B-2	Q77	K-7	RV24	N-11
D1	C-2	Q2	C-4	Q78	K-9	RV25	N-12
D2	C-4	Q3	C-1	Q79	K-8	RV26	N-13
D3	D-3	Q4	M-2	Q80	K-9	RV28	M-13
D4	B-2	Q5	L-2	Q81	K-8	RV29	N-14
D6	E-2	Q6	L-2	Q82	J-8	RV30	N-14
D7	D-11	Q7	L-1	Q83	I-8	RV31	M-13
D8	C-11	Q8	L-2	Q84	I-7	RV32	M-14
D10	E-5	Q9	K-2	Q85	H-7	RV33	M-14
D11	F-8	Q10	K-1	Q86	H-9	RV34	N-13
D13	J-16	Q11	K-2	Q87	G-8	RV35	N-14
D15	I-16	Q12	K-2	Q88	G-9	RV36	N-15
D16	G-1	Q13	K-2	Q89	F-9	RV37	L-14
D17	G-4	Q14	K-2	Q90	G-8	RV38	L-14
D18	G-7	Q15	J-2	Q91	F-8	RV39	L-15
D19	G-3	Q16	I-2	Q93	F-8	RV40	K-14
		Q17	I-1	Q94	E-8	RV41	K-14
		Q18	H-1	Q95	F-8	RV42	K-15
E1	N-15	Q19	H-2	Q96	F-7	RV43	L-14
E2	C-9	Q20	G-1	Q97	D-8	RV44	L-14
		Q21	H-3	Q98	D-8	RV45	L-15
FL1	N-2	Q22	F-2	Q99	D-9	RV46	K-14
FL2	N-5	Q23	G-2	Q100	F-13	RV47	K-14
FL3	N-8	Q24	G-1	Q101	F-12	RV48	K-15
		Q25	F-1	Q102	E-12	RV49	N-5
IC1	C-3	Q28	F-1	Q103	E-11	RV50	M-6
IC2	J-3	Q29	E-1	Q104	F-11	RV51	M-4
IC3	I-2	Q30	F-2	Q105	F-11	RV52	E-3
IC4	G-3	Q31	E-1	Q107	N-9	RV54	E-7
IC5	E-3	Q32	D-2	Q108	G-12	RV55	K-8
IC6	F-3	Q33	D-2	Q109	G-12	RV56	F-16
IC7	C-11	Q34	D-2	Q110	G-13	RV57	N-15
IC8	D-11	Q35	D-2	Q111	G-13	RV58	N-15
IC9	J-6	Q39	F-7	Q112	L-10	RV59	M-15
IC10	H-1	Q40	M-5	Q113	L-11	RV60	L-3
IC11	I-5	Q41	L-6	Q114	M-10	RV61	L-6
IC12	G-6	Q42	L-5	Q115	M-11	RV62	M-9
IC13	E-6	Q43	L-4	Q116	M-10		
IC14	F-6	Q44	L-5	Q117	N-11	S1	E-13
IC15	J-10	Q45	K-5	Q118	D-9		
IC16	I-9	Q46	K-4	Q119	E-3	TP1	C-6
IC17	G-9	Q47	K-6	Q120	E-6	TP2	D-5
IC18	E-9	Q48	K-5	Q121	E-9	TP3	B-5
IC19	F-9	Q49	K-5	Q140	F-11	TP4	K-1
IC20	G-12	Q50	K-5	Q141	G-11	TP5	I-1
IC21	G-11	Q51	J-5	Q142	L-3	TP6	F-3
IC22	C-12	Q52	I-5	Q143	L-5	TP7	E-2
IC23	C-14	Q53	I-4	Q144	L-8	TP8	N-13
IC24	H-13	Q54	H-4			TP9	C-6
IC25	M-15	Q55	H-5	RV1	D-2	TP10	I-4
IC26	I-14	Q56	G-5	RV2	N-3	TP11	E-5
IC27	M-12	Q57	H-6	RV4	H-2	TP12	N-14
IC28	J-14	Q58	F-6	RV5	G-2	TP13	C-7
IC32	C-16	Q59	G-5	RV6	N-3	TP14	I-7
IC33	E-16	Q60	G-4	RV7	D-3	TP15	K-4
IC34	E-14	Q61	F-4	RV8	H-5	TP16	G-9
IC35	E-13	Q63	F-4	RV9	G-5	TP17	E-9
IC36	J-12	Q64	E-5	RV10	N-5	TP18	N-15
IC37	J-11	Q65	F-5	RV11	D-6	TP19	C-10
IC38	M-11	Q66	E-4	RV12	N-6	TP20	L-9
IC39	G-16	Q67	D-5	RV14	H-8	TP21	G-15
IC40	H-16	Q68	D-5	RV15	G-8	TP22	G-6
IC41	K-15	Q69	D-5	RV16	N-7	TP23	K-7
IC42	L-12	Q70	D-5	RV17	D-10		
IC43	H-13	Q71	M-7	RV18	E-11		
IC44	E-14	Q72	L-8	RV19	E-12		
IC45	H-14	Q73	L-8	RV20	N-9		
IC46	H-4	Q74	K-7	RV21	N-4		
IC47	H-7	Q75	K-9	RV22	N-6		
IC48	E-12	Q76	K-8	RV23	N-7		

VA-86 1-632-991-14



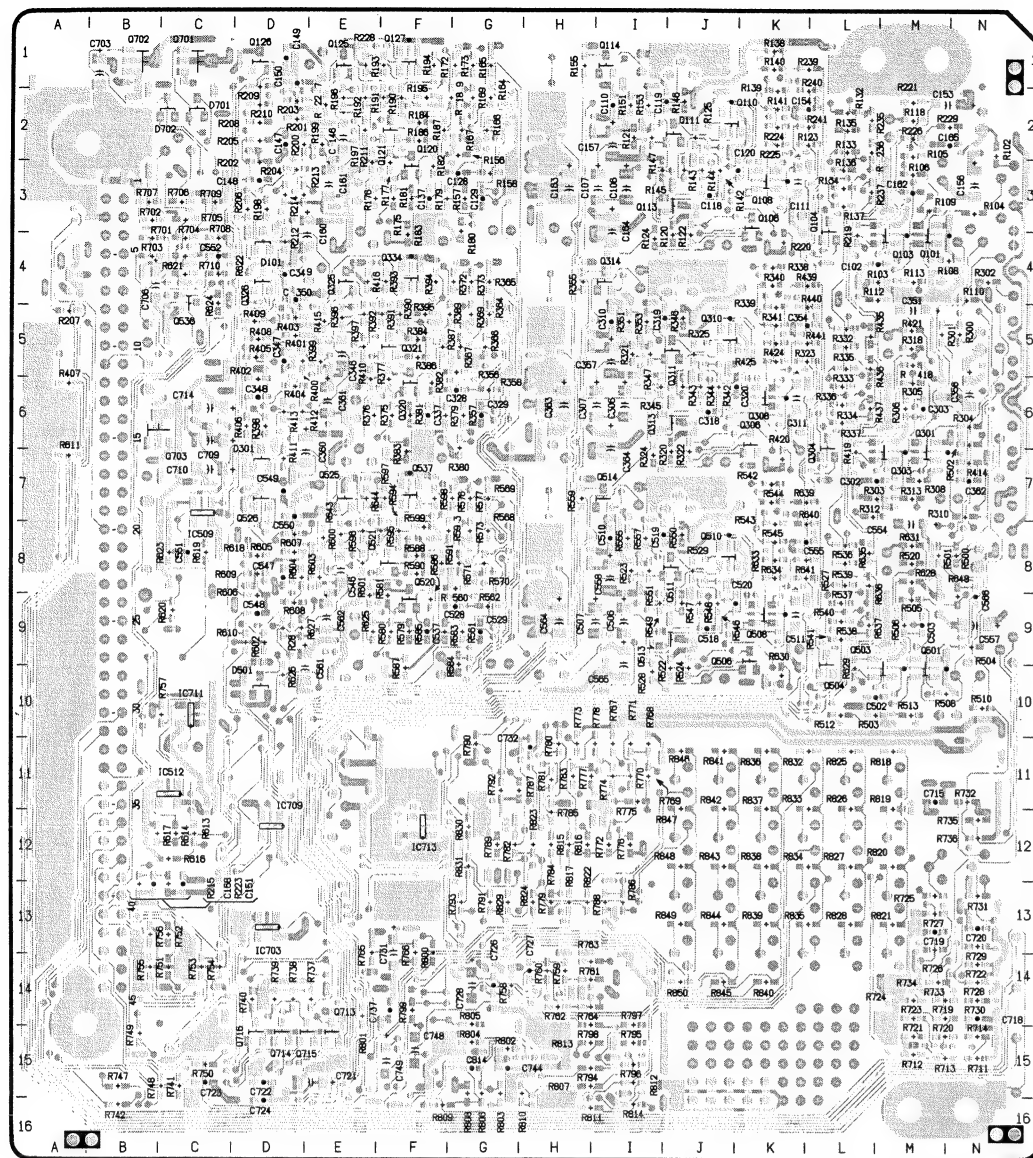
1-632-991-14 SOLDERING SIDE

C-19 (d)

CN1	A-2	IC47	H-7	Q74	K-7	RV21	N-4
D1	C-2	IC48	E-12	Q75	K-9	RV22	N-6
D2	C-4	Q1	B-2	Q76	K-8	RV23	N-7
D3	D-3	Q2	C-4	Q77	K-7	RV24	N-11
D4	B-2	Q3	C-1	Q78	K-9	RV25	N-12
D6	E-2	Q4	M-2	Q79	K-8	RV26	N-13
D7	D-11	Q5	L-2	Q80	K-9	RV28	M-13
D8	C-11	Q6	L-2	Q81	K-8	RV29	N-14
D10	E-5	Q7	L-1	Q82	J-8	RV30	N-14
D11	F-8	Q8	L-2	Q83	I-8	RV31	M-13
D13	J-16	Q9	K-2	Q84	I-7	RV32	M-14
D15	I-16	Q10	K-1	Q85	H-7	RV33	M-14
D16	G-1	Q11	K-2	Q86	H-9	RV34	N-13
D17	G-4	Q12	K-2	Q87	G-8	RV35	N-14
D18	G-7	Q13	K-2	Q88	G-9	RV36	N-15
D19	G-3	Q14	K-2	Q89	F-9	RV37	L-14
D20	G-6	Q15	J-2	Q90	G-8	RV38	L-14
D21	G-9	Q16	I-2	Q91	F-8	RV39	L-15
E1	N-15	Q17	I-1	Q92	F-8	RV40	K-14
E2	C-9	Q18	H-1	Q93	E-8	RV41	K-14
FL1	N-2	Q19	H-2	Q94	F-8	RV42	K-15
FL2	N-5	Q20	G-1	Q95	F-7	RV43	L-14
FL3	N-8	Q21	H-3	Q96	D-8	RV44	L-14
IC1	C-3	Q22	F-2	Q97	D-8	RV45	L-15
IC2	J-3	Q23	G-2	Q98	D-9	RV46	K-14
IC3	I-2	Q24	G-1	Q99	F-13	RV47	K-14
IC4	G-3	Q25	F-1	Q100	F-12	RV48	K-15
IC5	E-3	Q26	F-1	Q101	E-12	RV49	N-5
IC6	F-3	Q27	E-1	Q102	E-11	RV51	M-4
IC7	C-11	Q28	D-2	Q103	F-11	RV52	E-3
IC8	D-11	Q29	D-2	Q104	F-11	RV54	E-7
IC9	J-6	Q30	D-2	Q105	N-9	RV55	K-8
IC10	H-1	Q31	M-5	Q106	G-12	RV56	F-10
IC11	I-5	Q32	K-4	Q107	G-12	RV57	N-15
IC12	G-6	Q33	K-5	Q108	G-13	RV58	N-15
IC13	E-6	Q34	K-5	Q109	G-13	RV59	M-15
IC14	F-6	Q35	K-5	Q110	L-10	RV60	L-3
IC15	J-10	Q36	K-5	Q111	L-11	RV61	L-6
IC16	I-9	Q37	K-5	Q112	M-10	RV62	M-9
IC17	G-9	Q38	K-5	Q113	M-11	S1	E-13
IC18	E-9	Q39	K-5	Q114	M-10	TP1	C-6
IC19	F-9	Q40	K-5	Q115	N-11	TP2	D-5
IC20	G-12	Q41	K-5	Q116	D-9	TP3	B-5
IC21	G-11	Q42	K-5	Q117	E-3	TP4	K-1
IC22	C-12	Q43	K-5	Q118	E-6	TP5	I-1
IC23	C-14	Q44	K-5	Q119	E-9	TP6	F-3
IC24	H-13	Q45	K-5	Q120	F-11	TP7	E-2
IC25	M-15	Q46	K-5	Q121	G-11	TP8	N-13
IC26	I-14	Q47	K-5	Q122	L-3	TP9	C-6
IC27	M-12	Q48	K-5	Q123	L-5	TP10	I-4
IC28	J-14	Q49	K-5	Q124	L-8	TP11	E-5
IC32	C-16	Q50	K-5	Q125	D-2	TP12	N-14
IC33	E-16	Q51	K-5	Q126	N-3	TP13	C-7
IC34	E-14	Q52	K-5	Q127	H-2	TP14	I-7
IC35	E-13	Q53	K-5	Q128	G-2	TP15	K-4
IC36	J-12	Q54	K-5	Q129	N-3	TP16	G-9
IC37	J-11	Q55	K-5	Q130	H-5	TP17	E-9
IC38	M-11	Q56	K-5	Q131	G-5	TP18	N-15
IC39	G-16	Q57	K-5	Q132	N-5	TP19	C-10
IC40	H-16	Q58	K-5	Q133	D-6	TP20	L-9
IC41	K-15	Q59	K-5	Q134	N-6	TP21	G-15
IC42	L-12	Q60	K-5	Q135	H-8	TP22	G-6
IC43	H-13	Q61	K-5	Q136	G-8	TP23	K-7
IC44	E-14	Q62	K-5	Q137	N-7		
IC45	H-14	Q63	K-5	Q138	D-10		
IC46	H-4	Q64	K-5	Q139	E-12		
		Q65	K-5	Q140	N-9		
		Q66	K-5	Q141			
		Q67	K-5	Q142			
		Q68	K-5	Q143			
		Q69	K-5	Q144			
		Q70	K-5	RV1			
		Q71	K-5	RV2			
		Q72	K-5	RV3			
		Q73	K-5	RV4			
			K-5	RV5			
			K-5	RV6			
			K-5	RV7			
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			K-5	RV14			
			K-5	RV15			
			K-5	RV16			
			K-5	RV17			
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C-20 (d)

BVP-370/P



1-644-545-12 SOLDERING SIDE

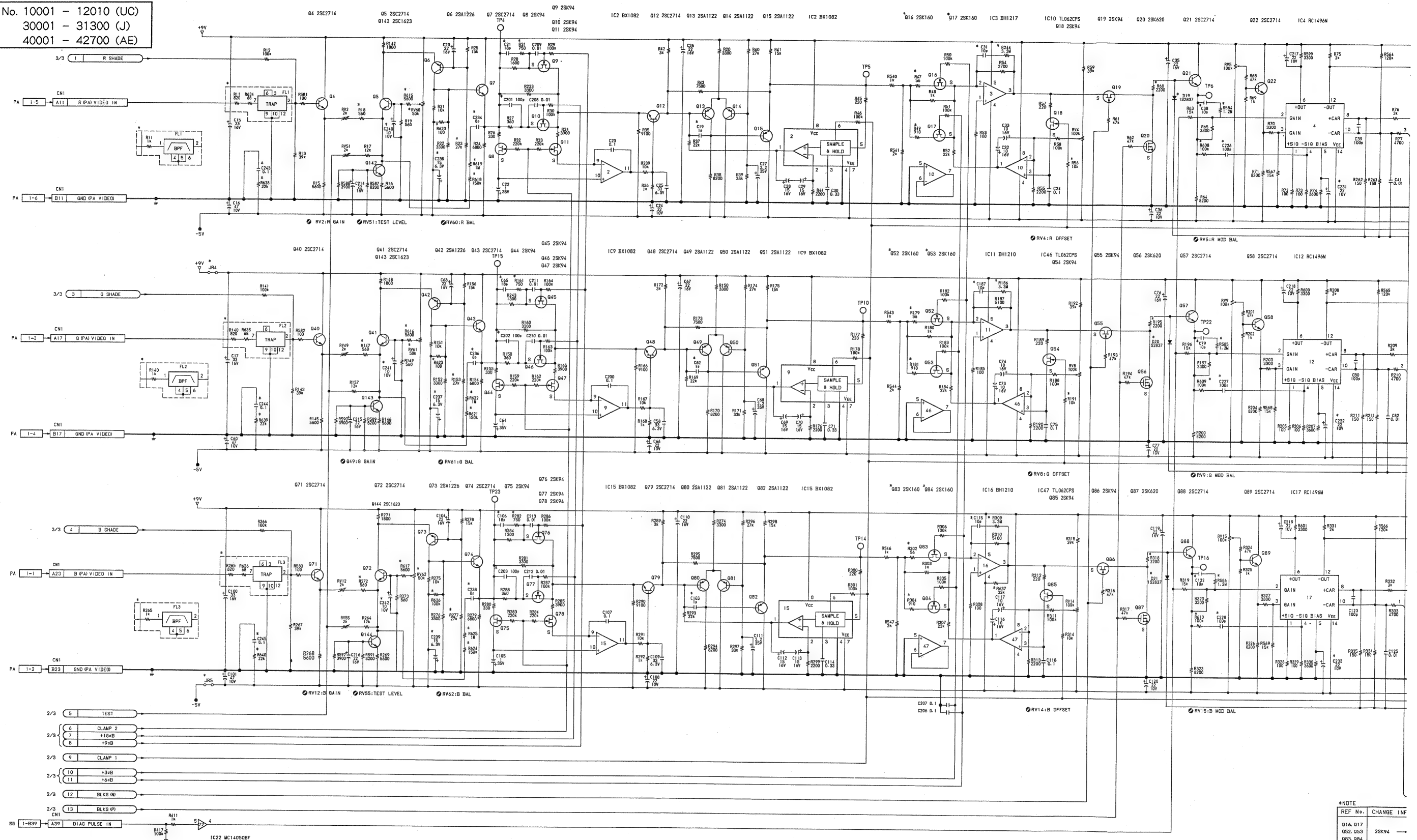
VA-131 1-644-545-12

*Soldering Side

CN1	A-2	IC714	H-13	*Q321	F-5	*Q715	E-15	RV727	J-11
		IC715	G-10	Q322	F-4	*Q716	D-15	RV728	J-12
*D101	D-4	IC716	F-14	*Q325	E-4	Q717	I-10	RV729	J-13
*D301	D-6	IC717	I-13	*Q326	D-4	Q718	I-11	RV730	J-13
*D501	D-10	IC718	G-12	Q327	D-6	Q719	H-10	RV731	J-11
D502	C-5	IC719	I-16	Q328	L-4	Q720	H-11	RV732	J-12
*D701	C-2	IC720	F-10	Q329	L-6	Q721	H-10	RV733	J-13
*D702	C-2	IC721	E-13	Q330	L-6	Q722	H-11	RV734	J-13
D703	B-5	IC722	F-16	Q331	K-4				
D704	C-4	IC723	G-16	Q332	L-5	RV100	N-2	S701	B-11
D705	I-15			Q333	L-5	RV101	M-4		
D706	H-16	*Q101	M-4	*Q334	F-4	RV102	J-1	TP100	J-3
		Q102	M-3	*Q501	M-9	RV103	H-3	TP101	H-3
E701	N-15	*Q103	M-4	Q502	M-9	RV104	E-1	TP102	F-2
E702	C-7	*Q104	L-3	*Q503	L-9	RV105	N-3	TP103	N-13
		Q105	K-4	*Q504	L-10	RV106	E-3	TP104	E-2
FL100	M-3	*Q106	K-3	Q505	K-10	RV300	N-4	TP300	J-6
FL300	L-7	*Q108	K-3	*Q506	J-9	RV302	I-4	TP301	H-6
FL500	L-11	*Q109	K-3	*Q508	K-9	RV303	H-6	TP302	F-5
		*Q110	K-2	Q509	L-9	RV304	D-4	TP303	N-14
IC100	I-3	*Q111	J-2	*Q510	J-8	RV305	N-5	TP304	E-5
IC103	I-2	*Q113	I-3	*Q511	J-8	RV306	E-6	TP500	J-10
IC104	G-1	*Q114	I-1	*Q513	I-9	RV500	N-6	TP501	H-8
IC105	E-2	Q115	I-3	*Q514	I-7	RV501	N-10	TP502	F-8
IC106	E-4	Q117	E-3	Q515	H-9	RV502	J-7	TP503	N-15
IC107	D-2	Q118	F-3	Q517	E-9	RV503	H-10	TP504	E-8
IC108	C-12	*Q120	F-2	Q518	F-9	RV504	E-7	TP701	B-2
IC300	I-6	*Q121	F-2	*Q520	F-8	RV505	N-7	TP702	B-3
IC303	H-6	Q122	F-1	*Q521	E-8	RV506	F-10	TP703	C-6
IC304	G-4	*Q125	E-1	Q522	F-7	RV701	C-2	TP704	M-12
IC305	E-5	*Q126	D-1	*Q525	E-7	RV702	M-13	TP705	G-14
IC306	D-7	*Q127	F-1	*Q526	D-7	RV703	N-12		
IC307	D-5	Q128	L-2	Q527	D-9	RV704	N-10		
IC500	I-8	Q129	L-2	Q528	L-8	RV705	N-4		
IC504	I-8	Q130	L-3	Q529	L-8	RV706	N-6		
IC505	G-7	Q131	K-1	Q530	L-9	RV707	N-7		
IC506	E-8	Q132	L-1	Q531	K-7	RV708	E-10		
IC507	D-10	Q133	L-2	Q532	L-7	RV709	E-11		
IC508	D-8	Q217	D-3	Q533	L-8	RV710	E-12		
*IC509	C-8	*Q301	M-6	*Q536	C-5	RV711	M-11		
IC511	C-12	Q302	M-6	*Q537	F-7	RV712	M-12		
*IC512	C-11	*Q303	M-7	*Q701	C-1	RV713	M-13		
IC701	B-4	*Q304	L-6	*Q702	B-1	RV714	M-13		
IC702	M-15	Q305	K-7	*Q703	C-7	RV715	L-11		
*IC703	D-13	*Q306	K-6	Q704	N-14	RV716	L-12		
IC704	D-15	*Q308	K-6	Q705	M-14	RV717	L-13		
IC705	D-14	Q309	L-6	Q706	N-13	RV718	L-13		
IC706	D-14	*Q310	J-5	Q707	N-13	RV719	L-11		
IC707	C-16	*Q311	J-5	Q708	N-14	RV720	L-12		
IC708	E-12	*Q313	I-6	Q709	N-13	RV721	L-13		
*IC709	D-11	*Q314	I-4	Q710	N-13	RV722	L-13		
IC710	E-11	Q315	I-6	Q711	N-14	RV723	K-11		
*IC711	C-10	Q317	F-7	Q712	N-12	RV724	K-12		
IC712	E-16	Q318	F-6	*Q713	E-14	RV725	K-13		
*IC713	F-12	*Q320	F-6	*Q714	D-15	RV726	K-13		

VA-86 (1/3) BOARD

Serial No. 10001 - 12010 (UC)
30001 - 31300 (J)
40001 - 42700 (AE)



*NOTE

REF No.	CHANGE	INF
Q16, Q17	2SK94	→
Q52, Q53	2SK94	→
Q83, Q84	2SK94	→
R78, R216	20k	→
R339	20k	→

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BVP-270/P

C-21 (a)

C-22 (a)

A

B

C

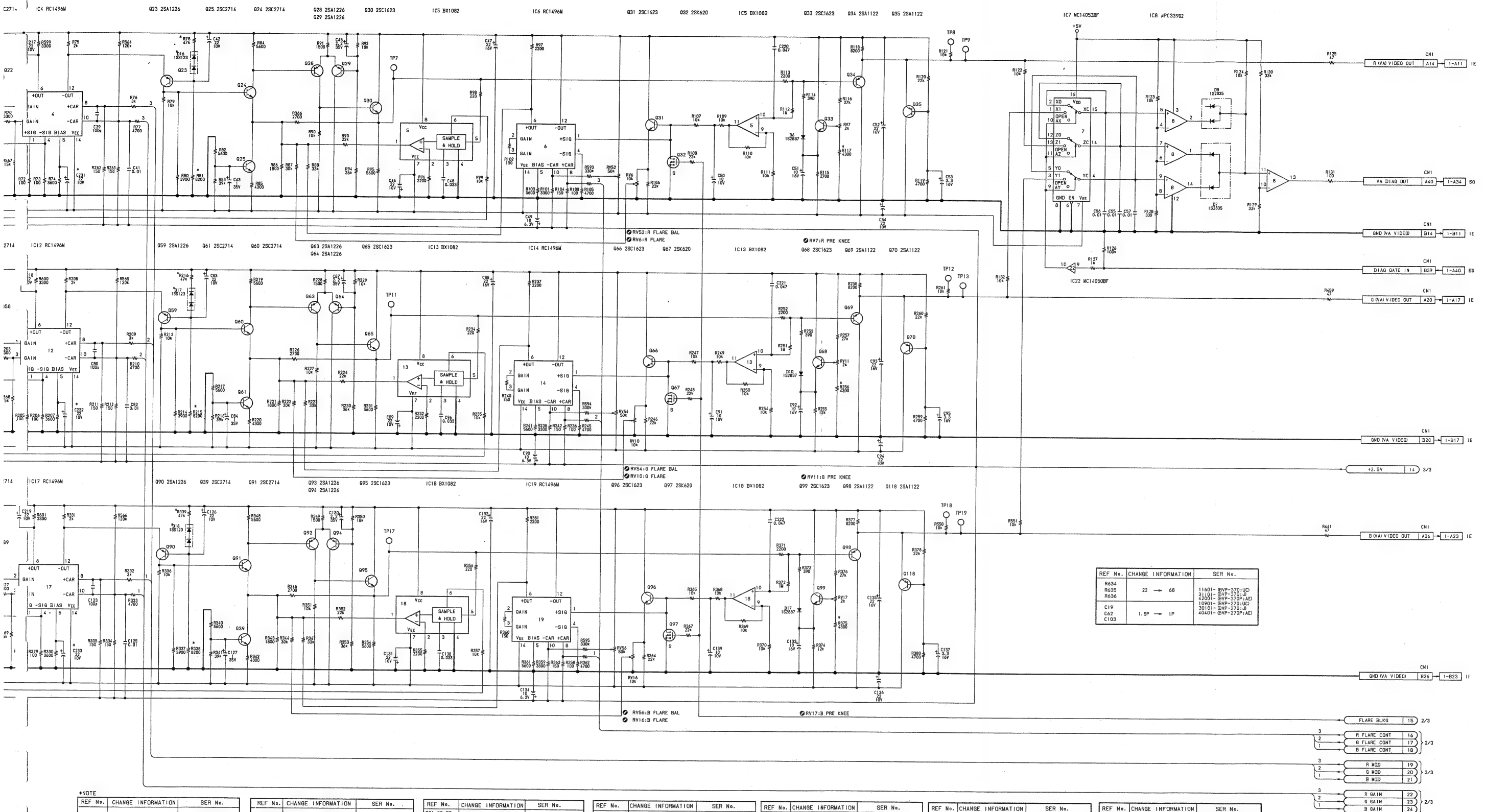
D

E

F

G

H



NOTE		
REF No.	CHANGE INFORMATION	SER No.
Q16, Q17 Q52, Q53 Q83, Q84	2SK94 → 2SK160	10101 - 0VP-370:J 30101 - 0VP-370:J 40101 - 0VP-370P:AE
R78, R216 R339	20k → 47k	10301 - 0VP-370:J 30101 - 0VP-370:J 40301 - 0VP-370P:AE 10201 - 0VP-270:J 30101 - 0VP-270:J 40101 - 0VP-270P:AE

REF No.	CHANGE INFORMATION	SER No.
R81, R215 R338	36k \longrightarrow 8200	10301- 0VP-370:UC 30301- 0VP-370:J 40301- 0VP-370P:AE
D1& D17 D18 RS94, RS95 RS96 RV52, RV54 RV56	ADD	10201- 0VP-270:UC 30101- 0VP-270:J 40101- 0VP-270P:AE

REF No.	CHANGE INFORMATION	SER No.
C31, 38, 72		
79, 122, 231		10501 - 0VP-370:UC
232, 233, 234		30401 - 0VP-370:J
236, 238		40601 - 0VP-370P:AEJ
D19, 20, 21	ADD	10401 - 0VP-270P:UCJ
R186, 244		30201 - 0VP-270:J
S30, 584, 585		40101 - 0VP-270P:AEJ
586, 618, 619		
621, 622		
624, 625		
R62, 227, 228	68P → 100P	
R608, 609, 610	91K → 100K	
C19, 62, 103	5P → 1PF	

REF No.	CHANGE	INFORMATION	SER No.
R23, 153, 277	27K	→ 30K	10501 - SWP-370; IJC 30401 - SWP-370; IJC 40601 - SWP-370; AE
R47, 179, 302	130K	→ 56K	13001 - SWP-270; IJC 30201 - SWP-270; IJC 40101 - SWP-270; AE
R49, 181, 304	1K	110	
R56, 191, 314	47K	→ 10K	
R60, 195, 318	100	→ 2.2K	
R235, 237			10501 - SWP-370; IJC 30401 - SWP-370; IJC 40601 - SWP-370; AE
C615, 616			10501 - SWP-270; IJC 30201 - SWP-270; IJC 40101 - SWP-270; AE
C620, 621			

REF No.	CHANGE INFORMATION	SER No.
JR4.5	ADD	10701 - @WP-370:UC 30501 - @WP-370:J 40801 - @WP-370P:AE
C19.62 103	1P → 1.5P	10701 - @WP-370:UC 30101 - @WP-270:J 40201 - @WP-370P:AE
C21.65 106	10P → 18P	10801 - @WP-370:UC 30401 - @WP-370:J 40901 - @WP-370P:AE
R31.161 282	1500 → 750	10701 - @WP-270:UC 30101 - @WP-270:J
R18.147	750 → 560	

REF No.	CHANGE INFORMATION	SER No.
R634, 635 636	ADD	10901-BVP-370:UC 30701-BVP-370:J 41001-BVP-370F:AE 10801-BVP-270:UC 30201-BVP-270:J 40201-BVP-270F:AE
R117, 256 375	3300 → 4300	10901-BVP-370:UC 30701-BVP-370:J 41101-BVP-370F:AE 10901-BVP-270:UC 30201-BVP-270:J 40301-BVP-270F:AE

REF No.	CHANGE INFORMATION	SER No.
C240, 241 242, 243 244, 245	ADD	11201 - @VP-370:UCJ 30801 - @VP-370:J 41401 - @VP-370:AEJ 10901 - @VP-270:UCJ 30201 - @VP-270:J 40301 - @VP-270D:AEJ
R638, 639 640		
R23, 153 277	30K → 27K	

2	G GAIN	25	} 2/3
1	B GAIN	24	

VA-86 BOARD (1/3)

BVP-370 (J)
 BVP-370 (UC)
 BVP-370P (AE)
 BVP-270 (J)
 BVP-270 (UC)

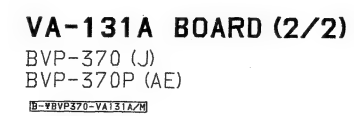
C-23 (a)

C-24 (a)

VA-86 BOARD (1/3)

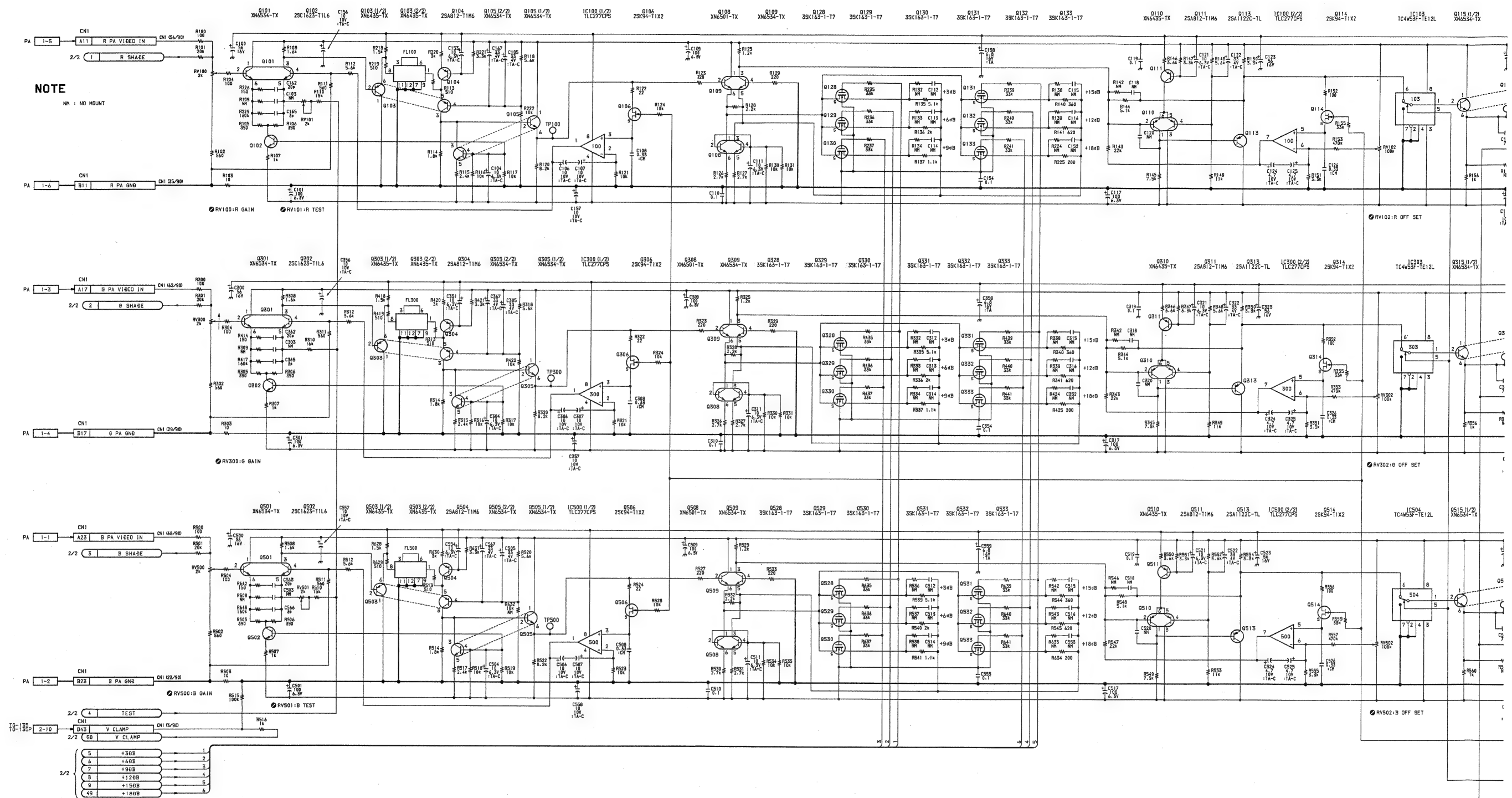
BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)
BVP-270 (J)
BVP-270 (UC)
BVP-270P (AE)

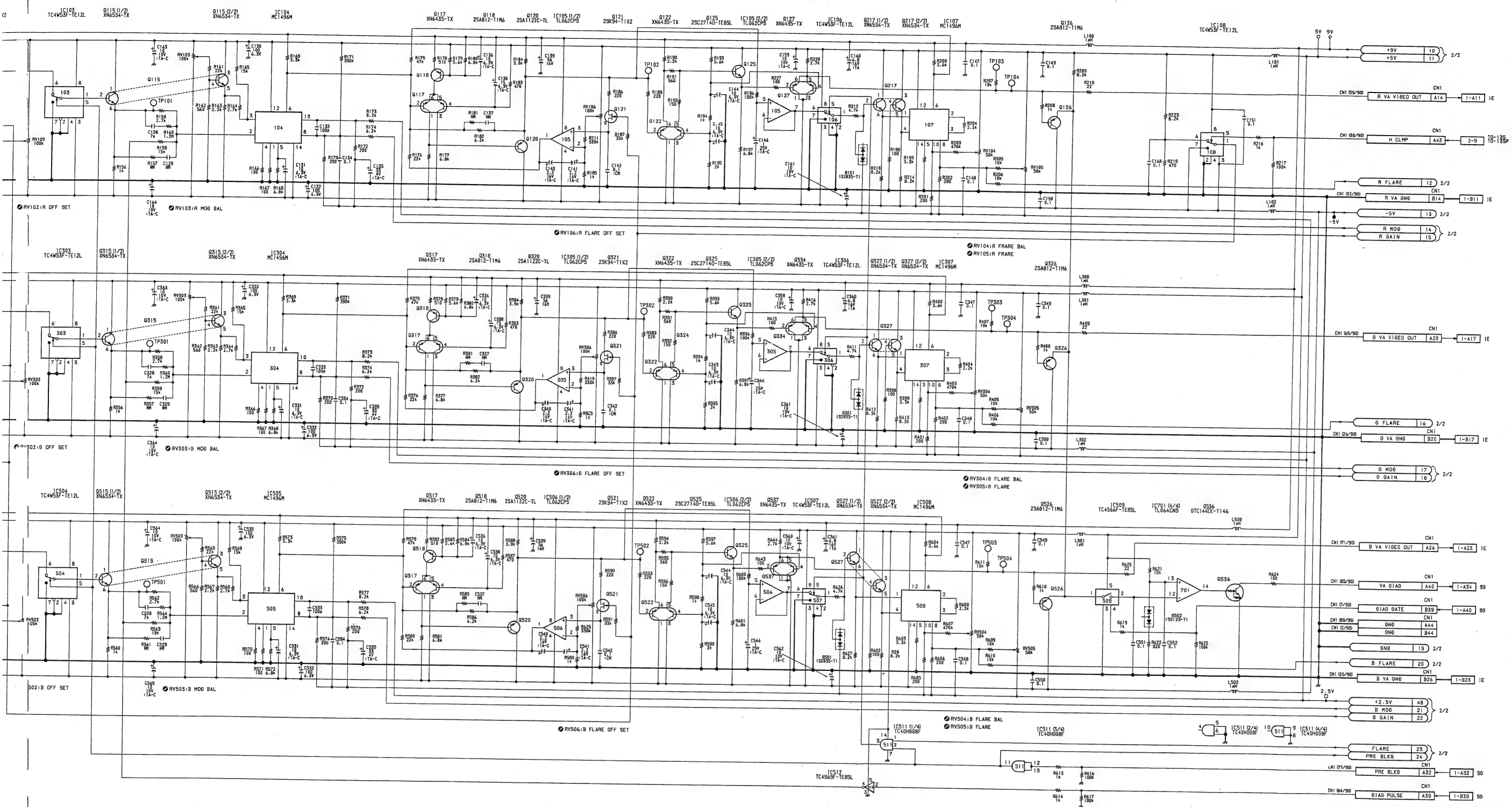
B-BVP370-VA86M#1



VA-131A BOARD (1/2)

Serial No. 31301 - (J)
42701 - (AE)

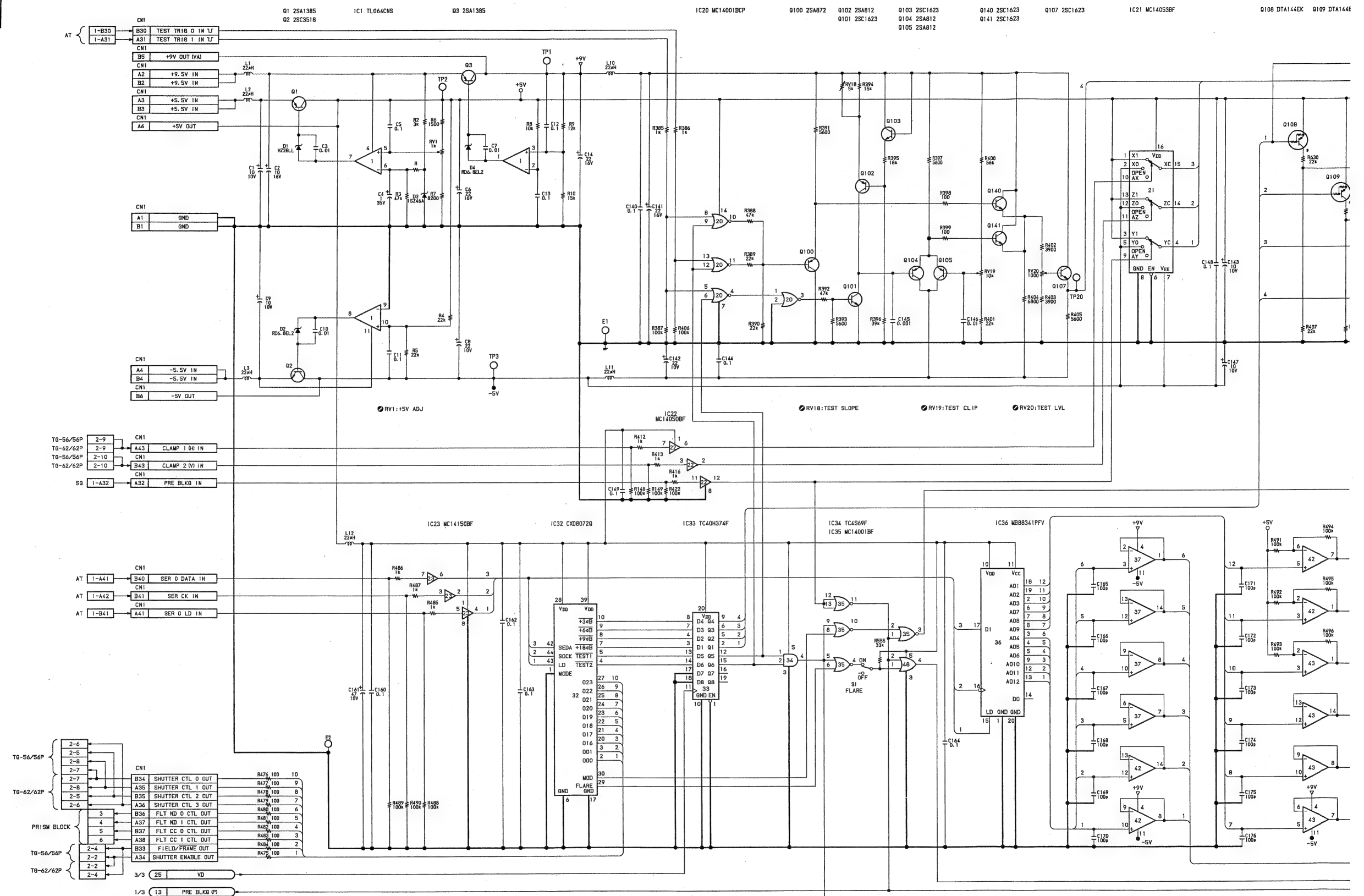


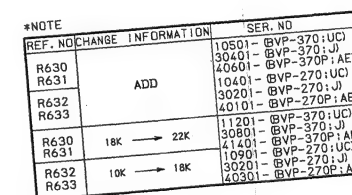


VA-131A BOARD (1/2)
BVP-370 (J)
BVP-370P (AE)
R-VBVP370-VA131A/H

VA-86 (2/3) BOARD

Serial No.	10001 – 12010 (UC)
	30001 – 31300 (J)
	40001 – 42700 (AE)





BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)
BVP-270 (J)
BVP-270 (UC)
BVP-270P (AE)

B-BVP370-VA86M#2

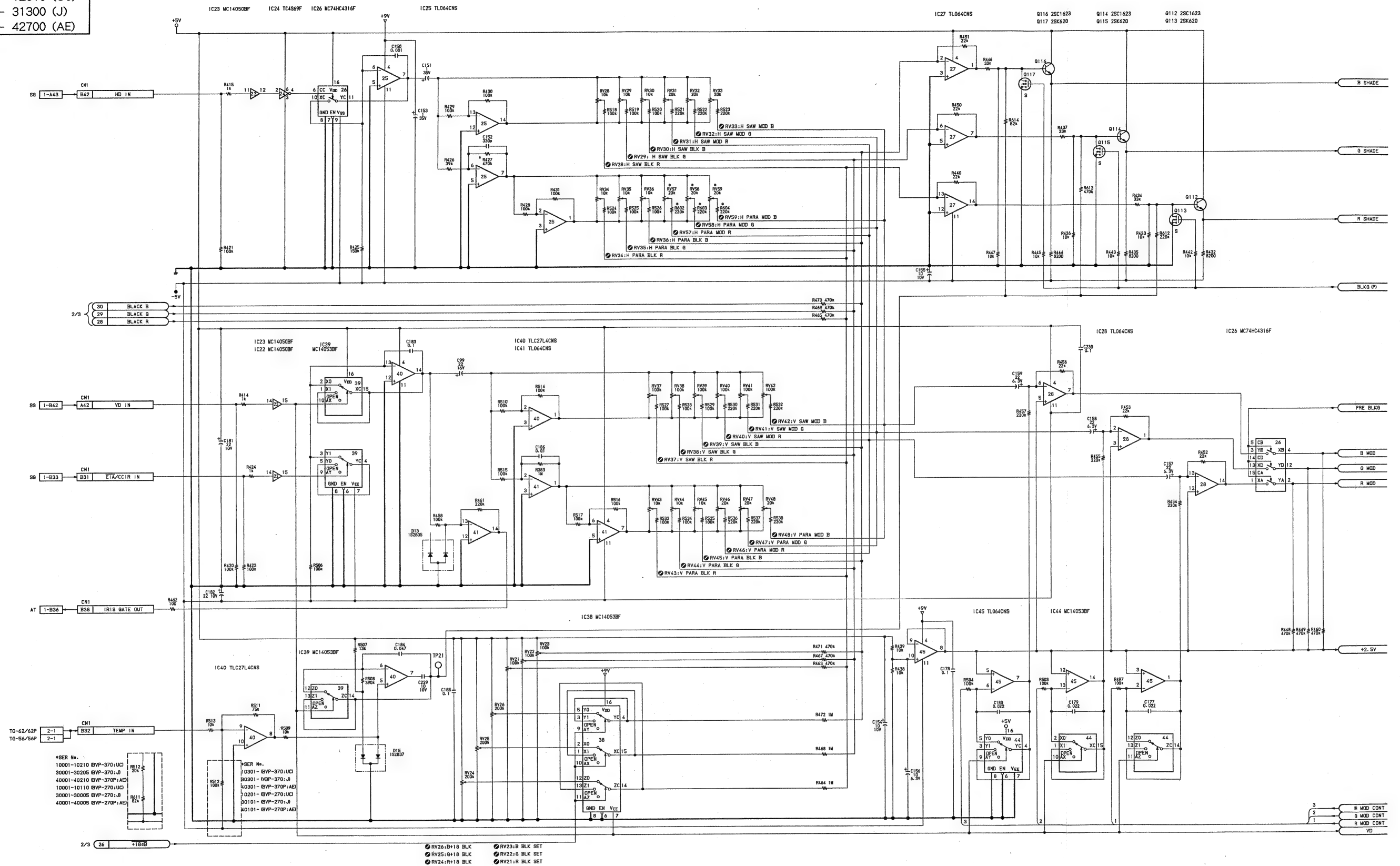
C-31

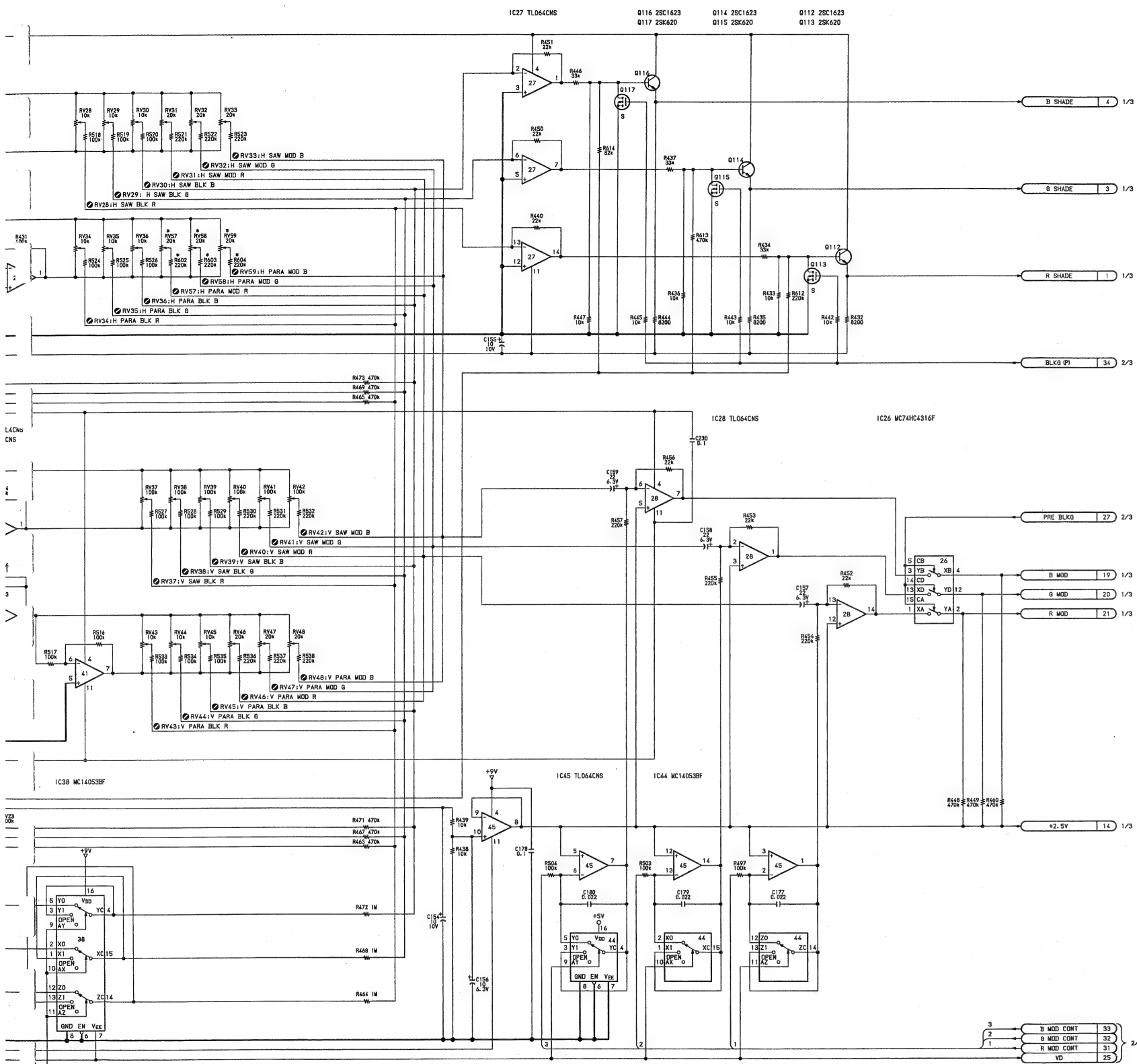
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1

VA-86 (3/3) BOARD

Serial No. 10001 - 12010 (UC)
30001 - 31300 (J)
40001 - 42700 (AE)





REF. No.	CHANGE INFORMATION	SER. No.
BV57		10301 - BVP-370 UC
BV59		20301 - BVP-370 UC
B602		30101 - BVP-270 UC
B603		21001 - BVP-270 UC
B604		20001 - BVP-270 UC
R427	100K → 470K	11001 - BVP-370 UC
		21001 - BVP-370 UC
		30001 - BVP-270 UC
		20001 - BVP-270 UC

VA-86 BOARD (3/3)

BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)
BVP-270 (J)
BVP-270 (UC)
BVP-270P (AE)

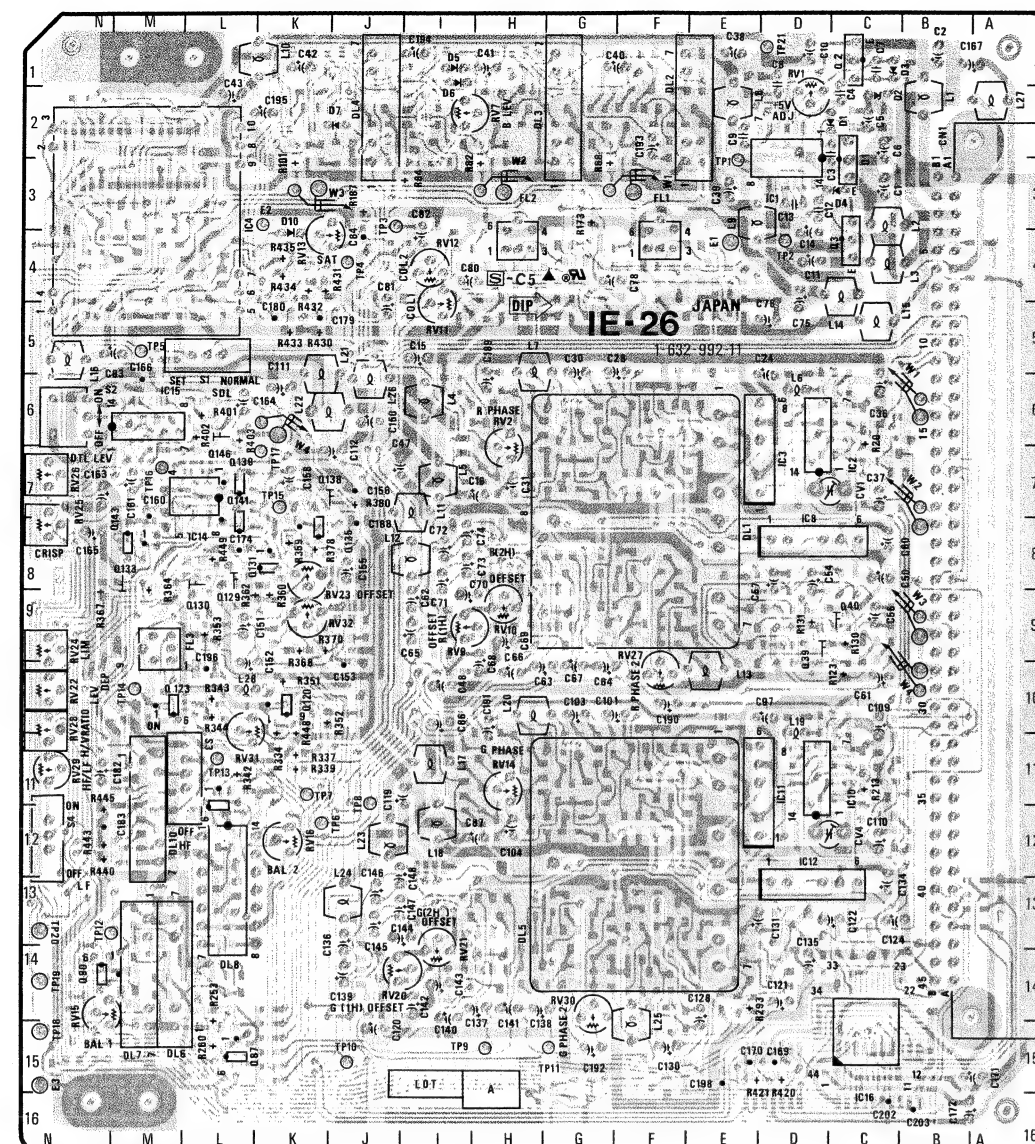
C-36

C-37

B-BVP370-VA86M#3

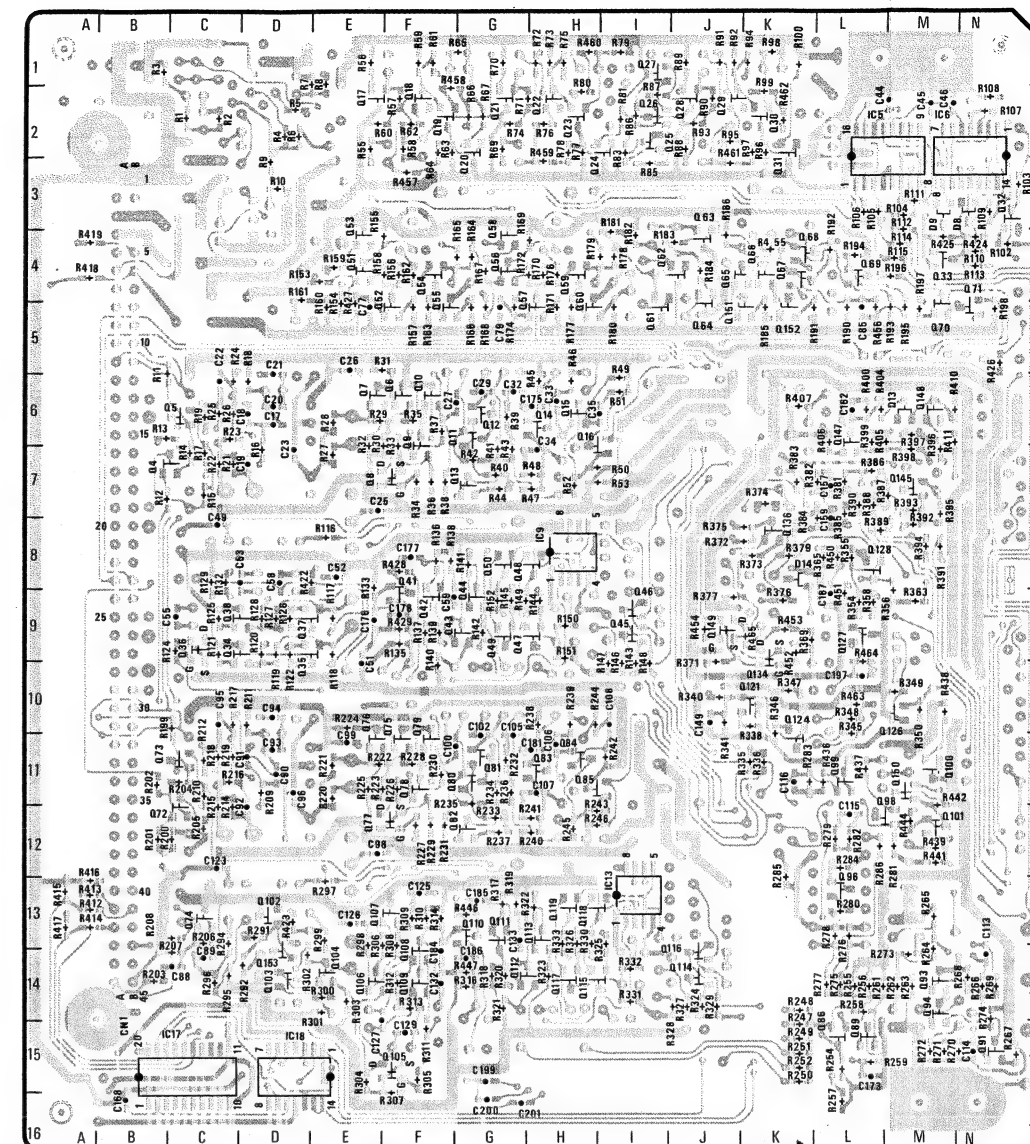
IE-26/26P BOARD

Serial No. 10501 - 10800 (UC)
30401 - 30600 (J)
40601 - 40900 (AE)



1-632-992-11 COMPONENT SIDE

C-38 (a)



1-632-992-11 SOLDERING SIDE

C-39 (a)

IE-26/26P

CN1

CV1

CV4

DL1

DL2

DL3

DL4

DL5

DL6

DL7

DL8

DL10

D1

D2

D3

D4

D5

D6

D7

D8

D9

D10

D13

D14

E1

E2

E3

FL1

FL2

FL3

IC1

IC2

IC3

IC5

IC6

IC8

IC9

IC10

IC11

IC12

IC13

IC14

IC15

IC16

IC17

IC18

Q1

Q2

Q3

Q4

Q5

Q6

Q7

Q8

Q9

Q10

Q11

Q12

Q13

Q14

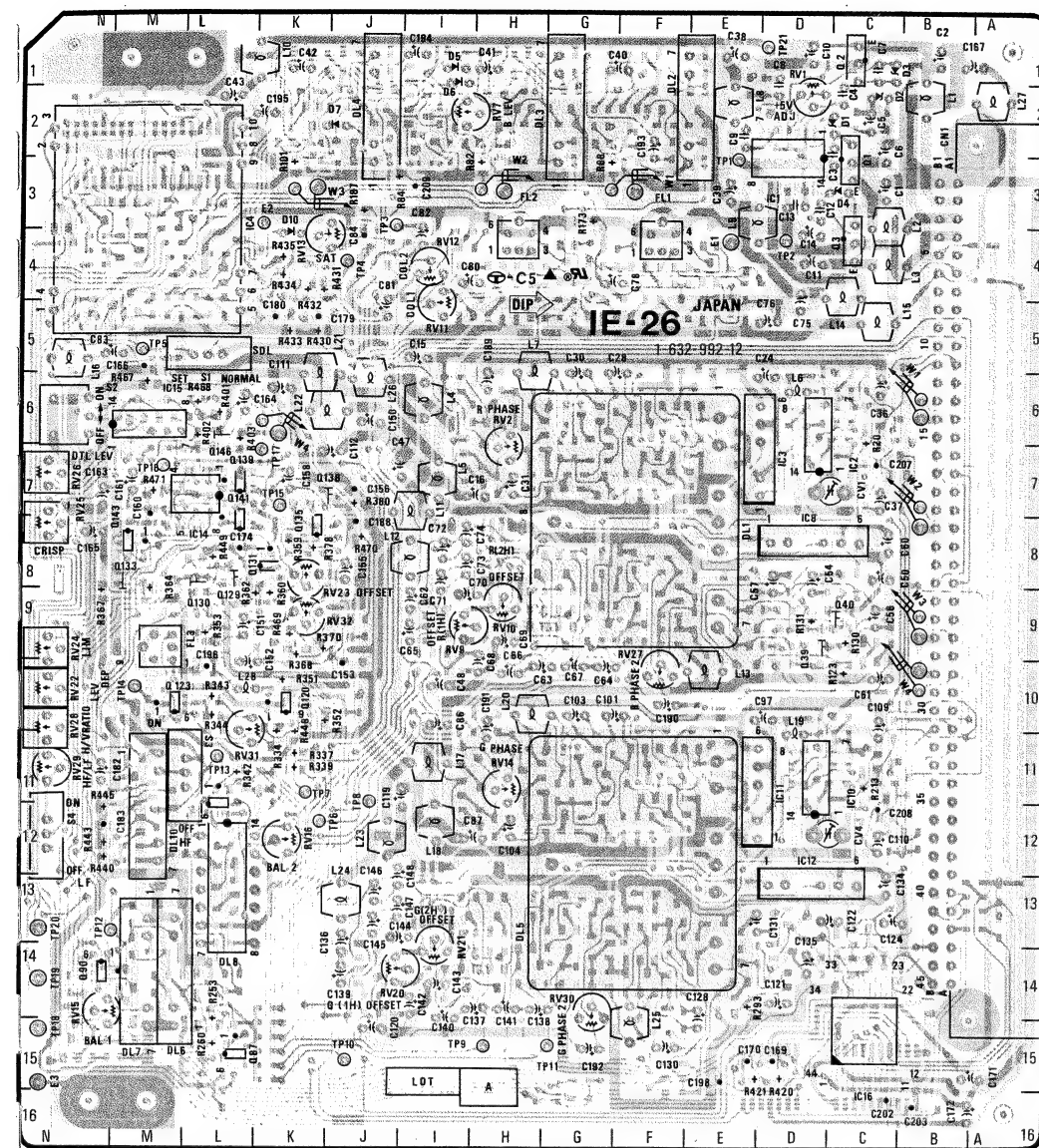
Q15

Q16

Q17

IE-26/26P BOARD

Serial No. 10801 - 11800 (UC)
30601 - 31200 (J)
40901 - 42100 (AE)



1-632-992-12 COMPONENT SIDE

C-38 (b)



1-632-992-12 SOLDERING SIDE

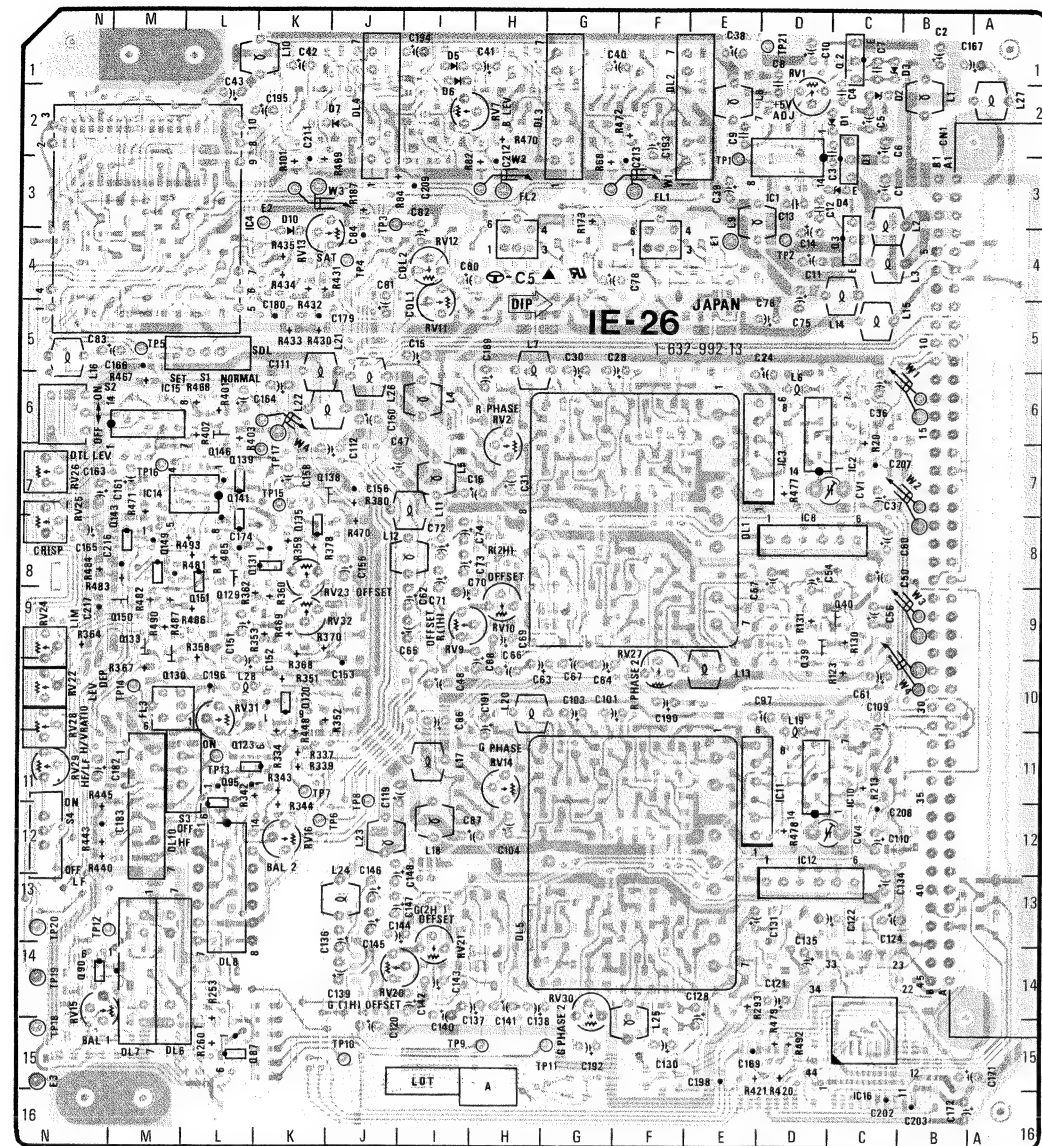
C-39 (b)

IE-26/26P

CN1	B-4
CP1	L-4
CV1	C-4
CV4	C-4
DL1	D-8
DL2	F-2
DL3	H-2
DL4	J-2
DL5	H-1
DL6	M-1
DL7	M-1
DL8	L-1
DL10	M-1
D1	C-2
D2	C-2
D3	C-1
D4	C-3
D5	I-1
D6	I-2
D7	J-2
D8	I-2
D9	M-3
D10	K-3
D13	M-6
D14	K-8
E1	E-4
E2	K-3
E3	N-1
FL1	F-3
FL2	H-3
FL3	L-9
IC1	D-3
IC2	C-7
IC3	D-7
IC5	L-2
IC6	M-2
IC8	D-7
IC9	H-8
IC10	C-1
IC11	D-1
IC12	D-1
IC13	I-1
IC14	L-8
IC15	M-6
IC16	C-1
IC17	C-1
IC18	D-1
Q1	C-2
Q2	C-1
Q3	C-4
Q4	B-7
Q5	B-6
Q6	F-6
Q7	E-6
Q8	E-7
Q9	F-6
Q10	F-6
Q11	F-6
Q12	G-6
Q13	F-7
Q14	H-6
Q15	H-6

IE-26/26P BOARD

Serial No. 11801 - 11190 (UC)
31201 - 31300 (J)
42101 - 42200 (AE)



1-632-992-13 COMPONENT SIDE

C-38 (c)



1-632-992-13 SOLDERING SIDE

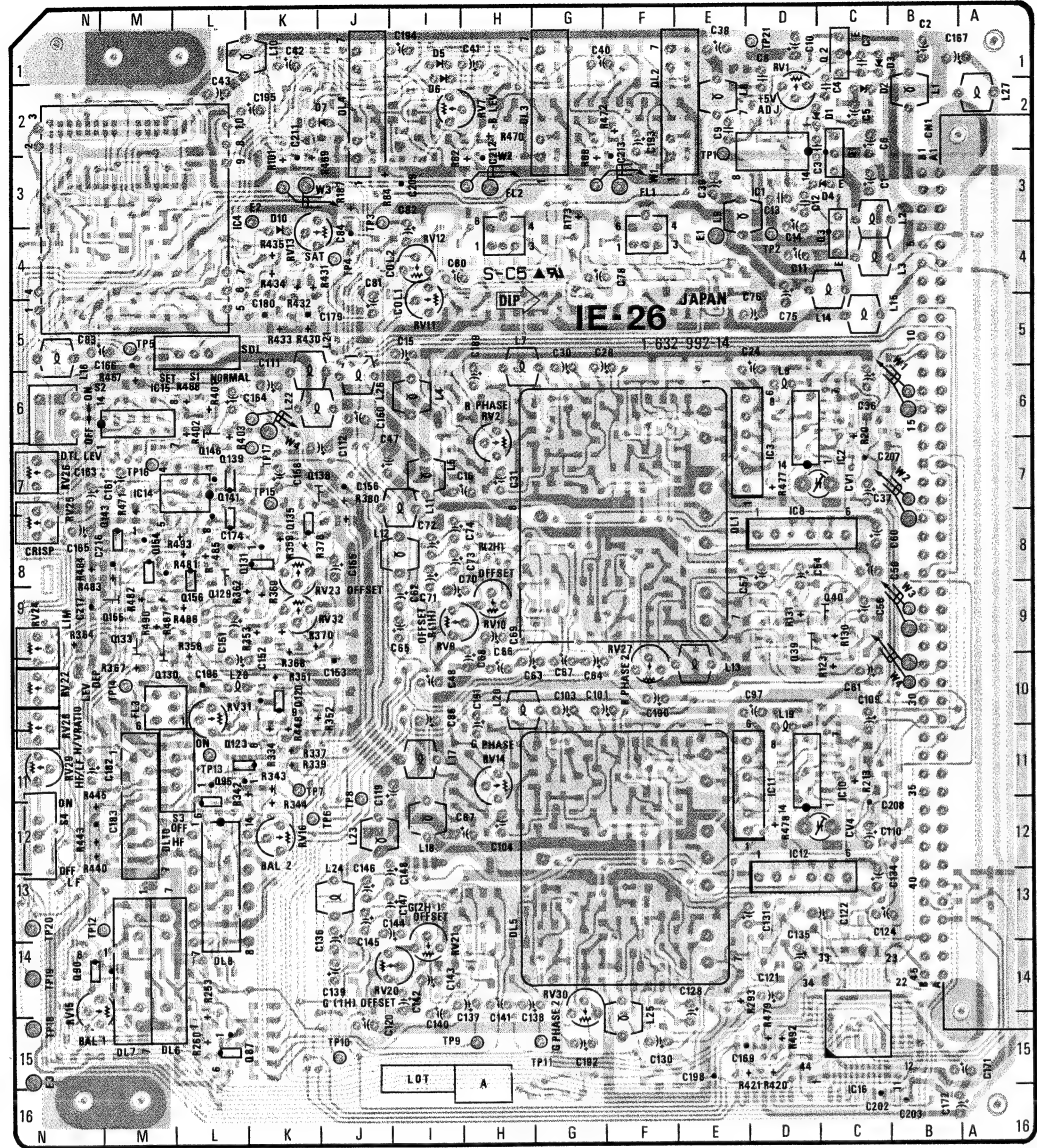
C-39 (c)

IE-26/26P

CN1	B
CP1	L
CV1	C
CV4	C
DL1	E
DL2	F
DL3	H
DL4	J
DL5	H
DL6	M
DL7	M
DL8	L
DL10	M
D1	C
D2	C
D3	C
D4	C
D5	I
D6	I
D7	J
D8	M
D9	M
D10	K
D13	M
D14	K
E1	E
E2	K
E3	N
FL1	F
FL2	H
FL3	M
IC1	D
IC2	C
IC3	D
IC4	L
IC5	L
IC6	M
IC8	D
IC9	H
IC10	C
IC11	D
IC12	D
IC13	I
IC14	M
IC15	M
IC16	C
IC17	C
IC18	D
Q1	C
Q2	C
Q3	C
Q4	B
Q5	B
Q6	F
Q7	E
Q8	E
Q9	F
Q10	F
Q11	F
Q12	G
Q13	F
Q14	H

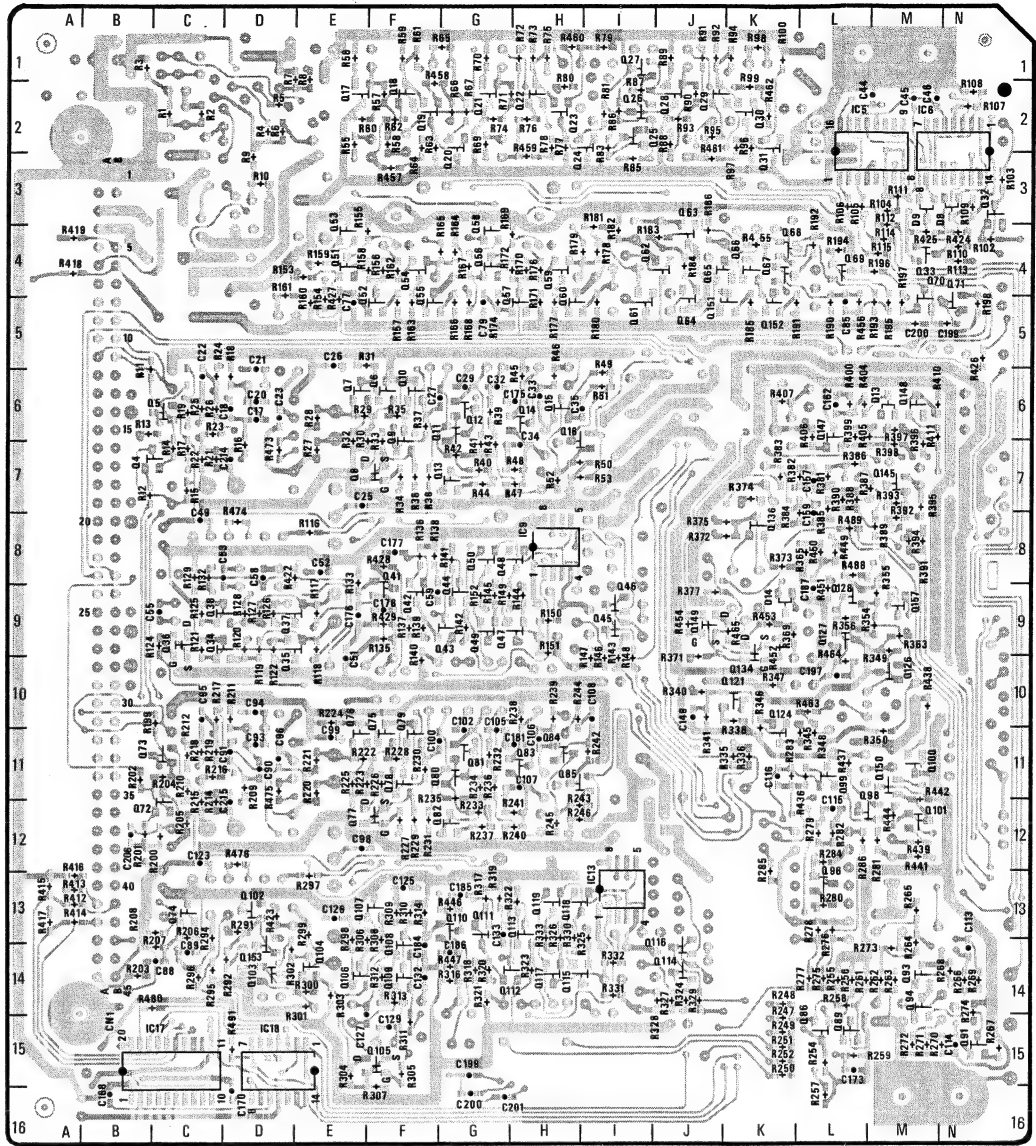
IE-26/26P BOARD

Serial No. 11901 -	(UC)
31301 -	(J)
42201 -	(AE)



1-632-992-14 COMPONENT SIDE

C-38 (d)



1-632-992-14 SOLDERING SIDE

C-39 (d)

CN1

CV1

CV4

DL1

DL2

DL3

DL4

DL5

DL6

DL7

DL8

DL10

D1

D2

D3

D4

D5

D6

D7

D8

D9

D10

D13

D14

E1

E2

E3

FL1

FL2

FL3

IC1

IC2

IC3

IC5

IC6

IC8

IC9

IC10

IC11

IC12

IC13

IC14

IC15

IC16

IC17

IC18

Q1

Q2

Q3

Q4

Q5

Q6

Q7

Q8

Q9

Q10

Q11

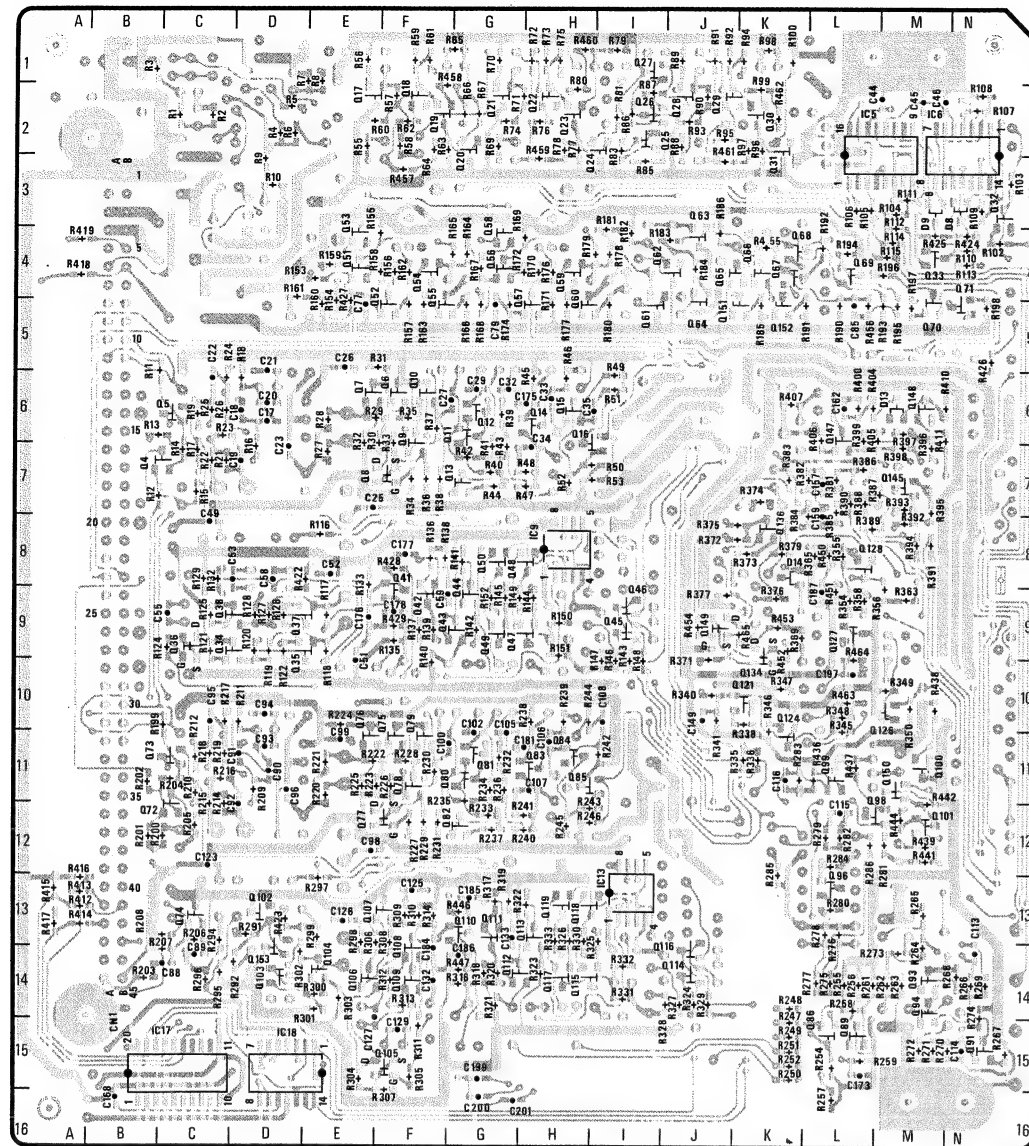
Q12

Q13

Q14

Q15

Q16



1-632-992-11 SOLDERING SIDE

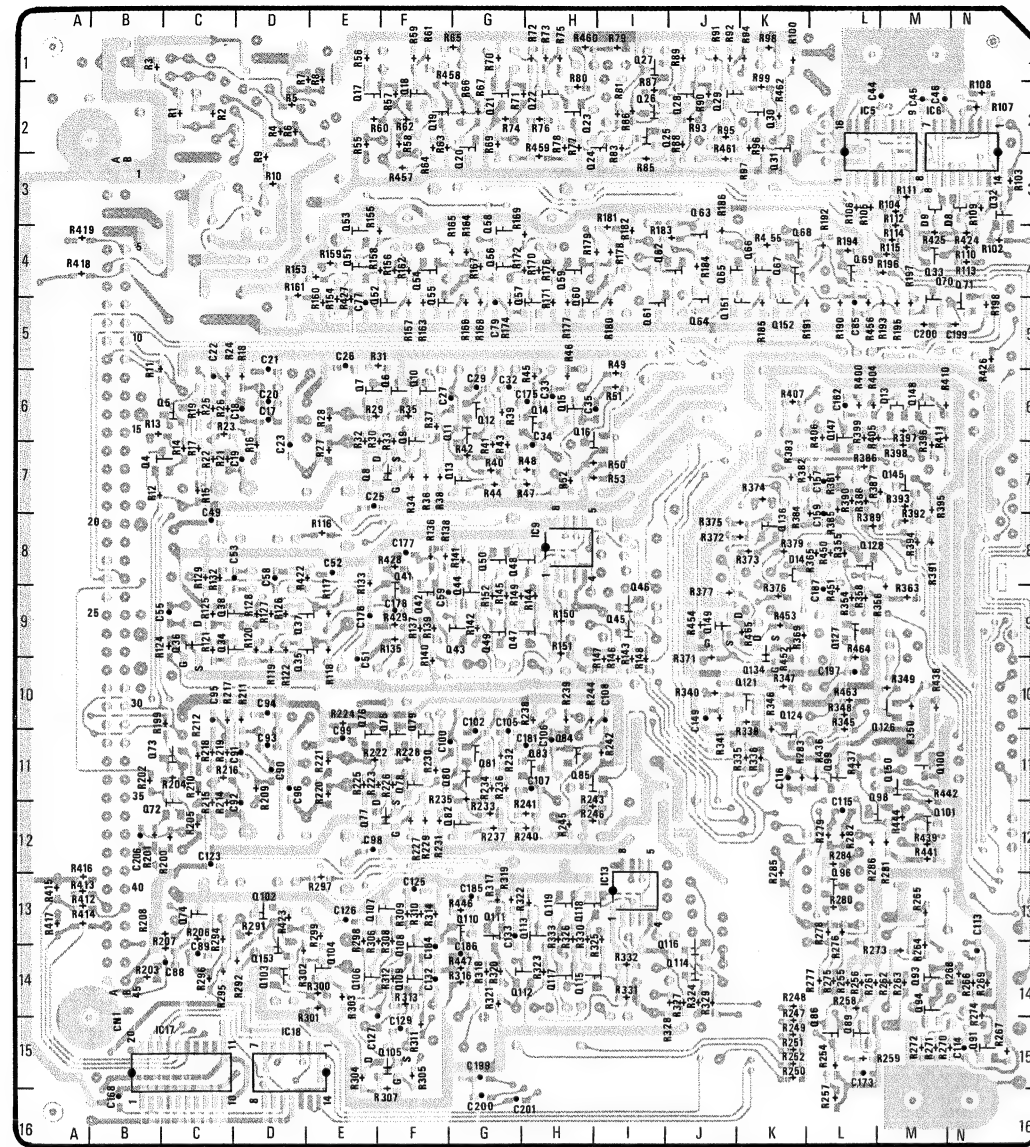
C-39 (a)

IE-26/26P 1-632-992-11

CN1	B-2	Q18	F-2	Q89	L-15	RV22	N-10
CV1	C-7	Q19	F-2	Q90	N-14	RV23	K-8
CV4	C-12	Q20	G-3	Q91	N-15	RV24	N-9
		Q21	G-2	Q93	M-14	RV25	N-7
		Q22	H-2	Q94	M-14	RV26	N-7
DL1	D-8	Q23	H-2	Q95	L-11	RV27	F-9
DL2	F-2	Q24	H-3	Q96	L-12	RV28	N-10
DL3	H-2	Q25	I-2	Q98	L-11	RV29	N-11
DL4	J-2	Q26	I-2	Q99	L-11	RV30	G-14
DL5	H-13	Q27	I-1	Q100	M-11	RV31	L-11
DL6	M-15	Q28	J-2	Q101	M-12	RV32	K-9
DL7	M-15	Q29	J-2	Q102	D-13		
DL8	L-14	Q30	K-2	Q103	D-14	S1	L-6
DL10	M-12	Q31	K-3	Q104	E-14	S2	M-6
		Q32	N-3	Q105	F-15	S3	L-11
D1	C-2	Q33	M-4	Q106	E-14	S4	N-12
D2	C-2	Q34	C-9	Q107	E-13		
D3	C-1	Q35	D-10	Q108	F-13	TP1	E-3
D4	C-3	Q36	C-9	Q109	F-14	TP2	D-4
D5	I-1	Q37	D-9	Q110	G-13	TP3	J-3
D6	I-2	Q38	C-9	Q111	G-13	TP4	J-4
D7	J-2	Q39	D-9	Q112	G-14	TP5	M-5
D8	I-2	Q40	C-9	Q113	H-13	TP6	J-12
D9	M-3	Q41	F-8	Q114	J-14	TP7	K-11
D10	K-3	Q42	F-9	Q115	H-14	TP8	J-11
D13	M-6	Q43	F-9	Q116	J-14	TP9	I-15
D14	K-8	Q44	G-9	Q117	H-14	TP10	J-15
		Q45	I-9	Q118	H-13		
E1	E-4	Q46	I-9	Q119	H-13		
E2	K-3	Q47	G-9	Q120	K-10		
E3	N-15	Q48	G-8	Q121	K-10		
		Q49	G-9	Q123	L-10		
FL1	F-3	Q50	G-8	Q124	K-10		
FL2	H-3	Q51	E-4	Q126	M-10		
FL3	L-9	Q52	E-4	Q127	L-9		
		Q53	E-3	Q128	L-8		
IC1	D-3	Q54	F-4	Q129	L-9		
IC2	C-7	Q55	F-4	Q130	L-9		
IC3	D-7	Q56	G-4	Q131	K-8		
IC5	L-2	Q57	G-4	Q133	M-8		
IC6	M-2	Q58	G-4	Q134	K-10		
IC8	D-7	Q59	H-4	Q135	J-8		
IC9	H-8	Q60	H-4	Q136	K-8		
IC10	C-11	Q61	I-5	Q138	J-7		
IC11	D-11	Q62	I-4	Q139	L-7		
IC12	D-12	Q63	J-3	Q141	L-7		
IC13	I-13	Q64	J-5	Q143	M-8		
IC14	L-8	Q65	J-4	Q145	M-7		
IC15	M-6	Q66	K-4	Q146	L-7		
IC16	C-16	Q67	K-4	Q147	L-6		
IC17	C-15	Q68	K-4	Q148	M-6		
IC18	D-15	Q69	L-4	Q149	J-9		
		Q70	M-5	Q150	M-11		
Q1	C-2	Q71	N-4	Q151	J-5		
Q2	C-1	Q72	B-12	Q152	K-5		
Q3	C-4	Q73	B-11	Q153	D-4		
Q4	B-7	Q74	C-13				
Q5	B-6	Q75	F-10	RV1	D-1		
Q6	F-6	Q76	E-10	RV2	H-6		
Q7	E-6	Q77	E-12	RV7	H-2		
Q8	E-7	Q78	E-10	RV9	I-9		
Q9	F-6	Q79	F-10	RV10	H-9		
Q10	F-6	Q80	F-11	RV11	I-5		
Q11	F-6	Q81	G-11	RV12	I-4		
Q12	G-6	Q82	F-12	RV13	K-4		
Q13	F-7	Q83	H-11	RV14	H-11		
Q14	H-6	Q84	H-11	RV15	N-14		
Q15	H-6	Q85	H-11	RV16	K-12		
Q16	H-6	Q86	L-14	RV20	J-14		
Q17	E-2	Q87	L-5	RV21	I-14		

C-40 (a)

BVP-370/P



1-632-992-12 SOLDERING SIDE

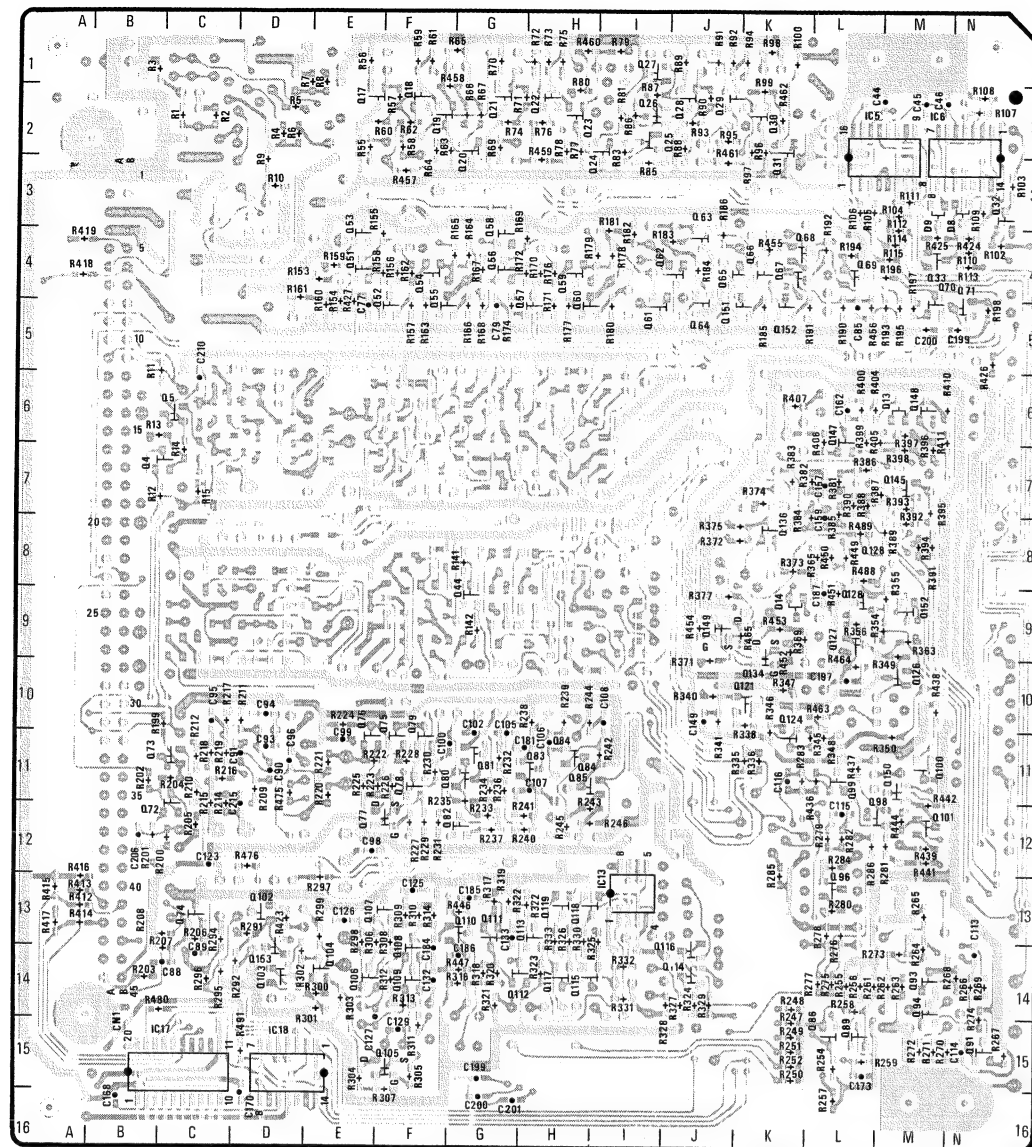
C-39 (b)

IE-26/26P 1-632-992-12

CN1	B-2	Q16	H-6	Q86	L-14	RV20	J-14
CP1	L-4	Q17	E-2	Q87	L-15	RV21	I-14
CV1	C-7	Q18	F-2	Q89	L-15	RV22	N-10
CV4	C-12	Q19	F-2	Q90	N-14	RV23	K-8
		Q20	G-3	Q91	N-15	RV24	N-9
		Q21	G-2	Q93	M-14	RV25	N-7
		Q22	H-2	Q94	M-14	RV26	N-7
DL1	D-8	Q23	H-2	Q95	L-11	RV27	F-9
DL2	F-2	Q24	H-3	Q96	L-12	RV28	N-10
DL3	H-2	Q25	I-2	Q98	L-11	RV29	N-11
DL4	J-2	Q26	I-2	Q99	L-11	RV30	G-14
DL5	H-13	Q27	I-1	Q100	M-11	RV31	L-11
DL6	M-15	Q28	J-2	Q101	M-12	RV32	K-9
DL7	M-15	Q29	J-2	Q102	D-13		
DL8	L-14	Q30	K-2	Q103	D-14	S1	L-6
DL10	M-12	Q31	K-3	Q104	E-14	S2	M-6
		Q32	N-3	Q105	F-15	S3	L-11
D1	C-2	Q33	M-4	Q106	E-14	S4	N-12
D2	C-2	Q34	C-9	Q107	E-13		
D3	C-1	Q35	D-10	Q108	F-13	TP1	E-3
D4	C-3	Q36	C-9	Q109	F-14	TP2	D-4
D5	I-1	Q37	D-9	Q110	G-13	TP3	J-3
D6	I-2	Q38	C-9	Q111	G-13	TP4	J-4
D7	J-2	Q39	D-9	Q112	G-14	TP5	M-5
D8	I-2	Q40	C-9	Q113	H-13	TP6	J-12
D9	M-3	Q41	F-8	Q114	J-14	TP7	K-11
D10	K-3	Q42	F-9	Q115	H-14	TP8	J-11
D13	M-6	Q43	F-9	Q116	J-14	TP9	I-15
D14	K-8	Q44	G-9	Q117	H-14	TP10	J-15
		Q45	I-9	Q118	H-13	TP11	G-15
E1	E-4	Q46	I-9	Q119	H-13	TP12	N-13
E2	K-3	Q47	G-9	Q120	K-10	TP13	L-11
E3	N-15	Q48	G-8	Q121	K-10	TP14	M-10
		Q49	G-9	Q123	L-10	TP15	K-7
FL1	F-3	Q50	G-8	Q124	K-10	TP16	M-7
FL2	H-3	Q51	E-4	Q126	M-10	TP17	K-7
FL3	L-9	Q52	E-4	Q127	L-9	TP18	N-15
		Q53	E-3	Q128	L-8	TP19	N-14
IC1	D-3	Q54	F-4	Q129	L-9	TP20	N-13
IC2	C-7	Q55	F-4	Q130	L-9	TP21	D-1
IC3	D-7	Q56	G-4	Q131	K-8		
IC5	L-2	Q57	G-4	Q133	M-8		
IC6	M-2	Q58	G-4	Q134	K-10		
IC8	D-7	Q59	H-4	Q135	J-8		
IC9	H-8	Q60	H-4	Q136	K-8		
IC10	C-11	Q61	I-5	Q138	J-7		
IC11	D-11	Q62	I-4	Q139	L-7		
IC12	D-12	Q63	J-3	Q141	L-7		
IC13	I-13	Q64	J-5	Q143	M-8		
IC14	L-8	Q65	J-4	Q145	M-7		
IC15	M-6	Q66	K-4	Q146	L-7		
IC16	C-16	Q67	K-4	Q147	L-6		
IC17	C-15	Q68	K-4	Q148	M-6		
IC18	D-15	Q69	L-4	Q149	J-9		
		Q70	M-5	Q150	M-11		
Q1	C-2	Q71	N-4	Q151	J-5		
Q2	C-1	Q72	B-12	Q152	K-5		
Q3	C-4	Q73	B-11	Q153	D-4		
Q4	B-7	Q74	C-13				
Q5	B-6	Q75	F-10	RV1	D-1		
Q6	F-6	Q76	E-10	RV2	H-6		
Q7	E-6	Q77	E-12	RV7	H-2		
Q8	E-7	Q78	E-10	RV9	I-9		
Q9	F-6	Q79	F-10	RV10	H-9		
Q10	F-6	Q80	F-11	RV11	I-5		
Q11	F-6	Q81	G-11	RV12	I-4		
Q12	G-6	Q82	F-12	RV13	K-4		
Q13	F-7	Q83	H-11	RV14	H-11		
Q14	H-6	Q84	H-11	RV15	N-14		
Q15	H-6	Q85	H-11	RV16	K-12		

C-40 (b)

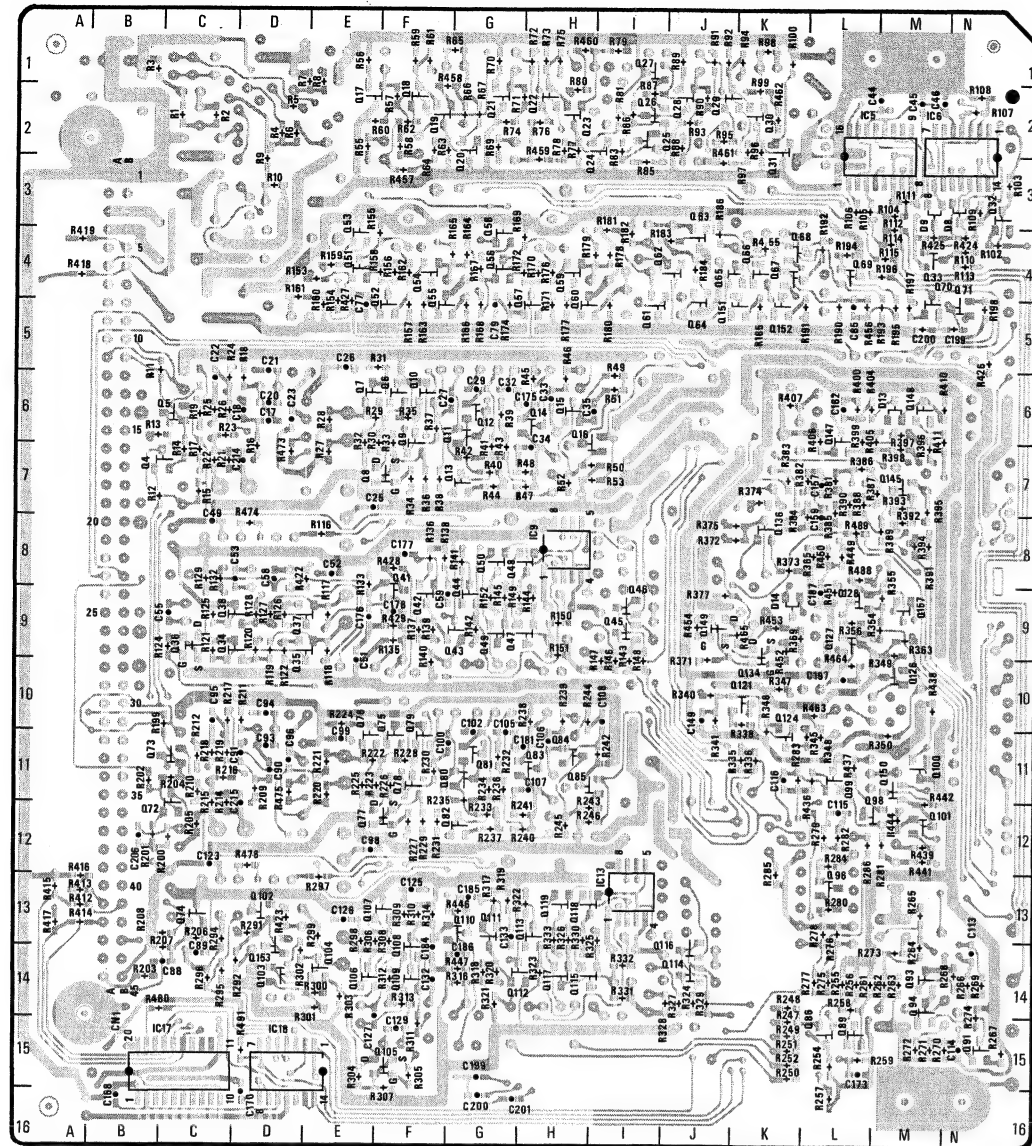
BVP-370/P



1-632-992-13 SOLDERING SIDE

IE-26/26P 1-632-992-13

CN1	B-2	Q15	H-6	Q85	H-11	RV12	I-4
		Q16	H-6	Q86	L-14	RV13	K-4
CP1	L-4	Q17	E-2	Q87	L-15	RV14	H-11
		Q18	F-2	Q89	L-15	RV15	N-14
CV1	C-7	Q19	F-2	Q90	N-14	RV16	K-12
CV4	C-12	Q20	G-3	Q91	N-15	RV20	J-14
		Q21	G-2	Q93	M-14	RV21	I-14
DL1	E-8	Q22	H-2	Q94	M-14	RV22	N-10
DL2	F-2	Q23	H-2	Q95	L-11	RV23	K-8
DL3	H-2	Q24	H-3	Q96	L-12	RV24	N-9
DL4	J-2	Q25	I-2	Q98	L-11	RV25	N-7
DL5	H-13	Q26	I-2	Q99	L-11	RV26	N-7
DL6	M-15	Q27	I-1	Q100	M-11	RV27	F-9
DL7	M-15	Q28	J-2	Q101	M-12	RV28	N-10
DL8	L-14	Q29	J-2	Q102	D-13	RV29	N-11
DL10	M-12	Q30	K-2	Q103	D-14	RV30	N-11
		Q31	K-3	Q104	E-14	RV31	L-10
D1	C-2	Q32	N-3	Q105	F-15	RV32	K-9
D2	C-2	Q33	M-4	Q106	E-14		
D3	C-1	Q34	C-9	Q107	E-13	S1	L-6
D4	C-3	Q35	D-10	Q108	F-14	S2	M-6
D5	I-1	Q36	C-9	Q109	F-14	S3	L-11
D6	I-2	Q37	D-9	Q110	G-13	S4	N-12
D7	J-2	Q38	C-9	Q111	G-13		
D8	M-3	Q39	D-9	Q112	G-14	TP1	E-3
D9	M-3	Q40	C-9	Q113	H-13	TP2	D-4
D10	K-3	Q41	F-8	Q114	J-14	TP3	J-3
D13	M-6	Q42	F-9	Q115	H-14	TP4	J-4
D14	K-9	Q43	G-9	Q116	J-14	TP5	M-5
		Q44	G-9	Q117	H-14	TP6	J-12
E1	E-4	Q45	I-9	Q118	H-13	TP7	K-11
E2	K-3	Q46	I-9	Q119	H-13	TP8	J-11
E3	N-15	Q47	G-9	Q120	K-10	TP9	I-15
		Q48	G-8	Q121	K-10	TP10	J-15
FL1	F-3	Q49	G-9	Q123	L-11	TP11	G-15
FL2	H-3	Q50	G-8	Q124	K-10	TP12	N-13
FL3	M-10	Q51	E-4	Q126	M-10	TP13	L-11
		Q52	E-4	Q127	L-9	TP14	M-10
IC1	D-3	Q53	E-3	Q128	L-9	TP15	K-7
IC2	C-7	Q54	F-4	Q129	L-9	TP16	M-7
IC3	D-7	Q55	F-4	Q130	M-10	TP17	K-7
IC4	L3	Q56	G-4	Q131	K-8	TP18	N-15
IC5	L-2	Q57	G-4	Q133	M-9	TP19	N-14
IC6	M-2	Q58	G-4	Q134	K-10	TP20	N-13
IC8	D-8	Q59	H-4	Q135	K-8	TP21	D-1
IC9	H-8	Q60	H-4	Q136	K-8		
IC10	C-11	Q61	I-5	Q138	J-7		
IC11	D-11	Q62	I-4	Q139	L-7		
IC12	D-12	Q63	J-3	Q141	L-7		
IC13	I-13	Q64	J-5	Q143	M-8		
IC14	M-7	Q65	J-4	Q145	M-7		
IC15	M-6	Q66	K-4	Q146	L-7		
IC16	C-16	Q67	K-4	Q147	L-6		
IC17	C-15	Q68	K-4	Q148	M-6		
IC18	D-15	Q69	L-4	Q149	J-9		
		Q70	M-5	Q150	M-11		
Q1	C-2	Q71	N-4	Q151	J-5		
Q2	C-1	Q72	B-12	Q152	K-5		
Q3	C-4	Q73	B-11	Q153	D-14		
Q4	B-7	Q74	C-13	Q154	D-14		
Q5	B-6	Q75	F-10	Q155	D-14		
Q6	F-6	Q76	E-10	Q156	D-14		
Q7	E-6	Q77	E-12	Q157	D-14		
Q8	E-7	Q78	F-11				
Q9	F-6	Q79	F-10	RV1	D-1		
Q10	F-6	Q80	F-11	RV2	H-6		
Q11	F-6	Q81	G-11	RV7	H-2		
Q12	G-6	Q82	F-12	RV9	I-9		
Q13	F-7	Q83	H-11	RV10	H-9		
Q14	H-6	Q84	H-11	RV11	I-5		



1-632-992-14 SOLDERING SIDE

C-39 (d)

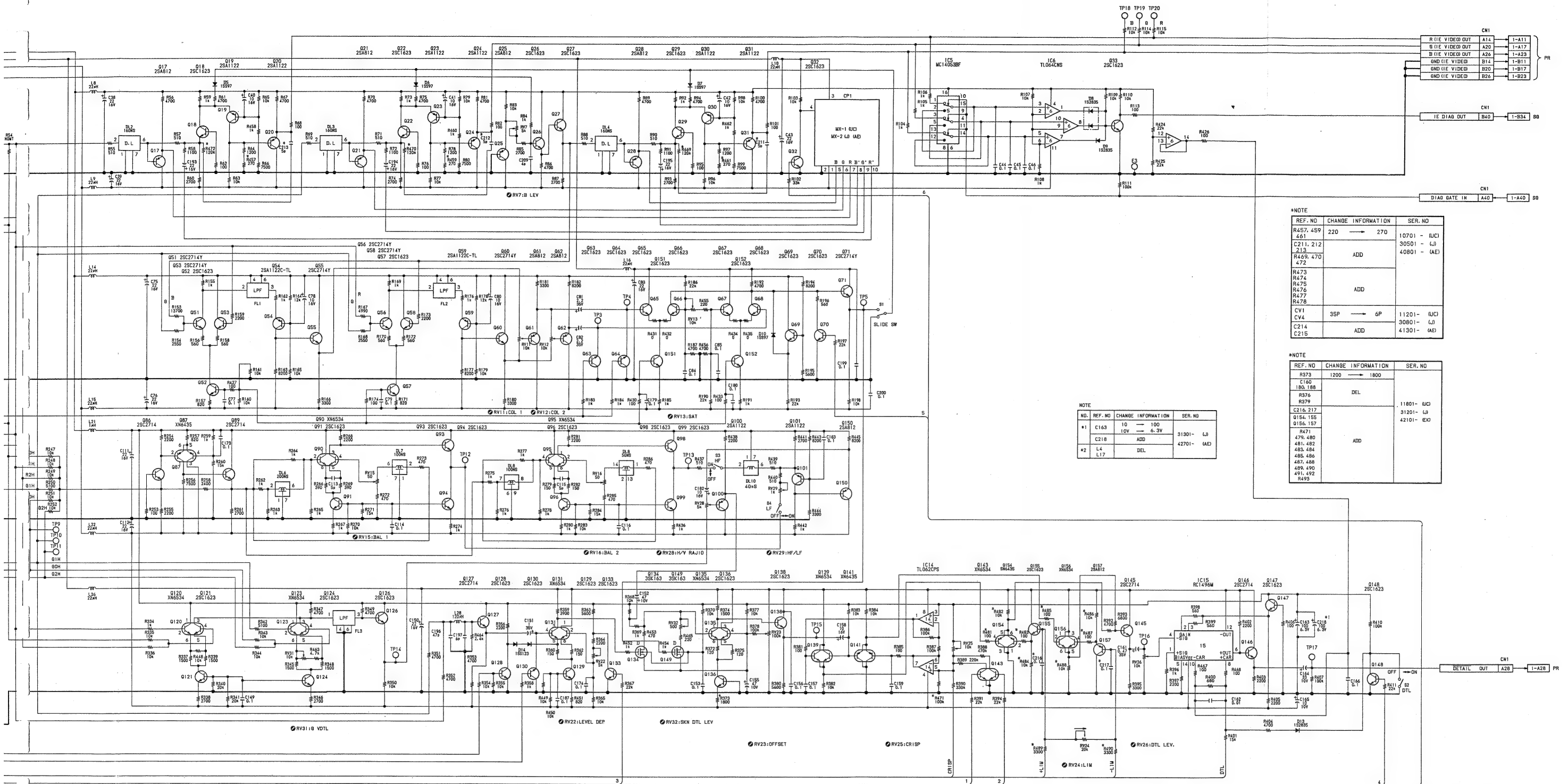
IE-26/26P 1-632-992-14

CN1	B-2	Q17	E-2	Q86	L-14	RV12	I-4
CV1	C-7	Q18	F-2	Q87	L-15	RV13	K-4
CV4	C-12	Q19	F-2	Q89	L-15	RV14	H-11
		Q20	G-3	Q90	N-14	RV15	N-14
		Q21	G-2	Q91	N-15	RV16	K-12
DL1	D-8	Q22	H-2	Q93	M-14	RV20	J-14
DL2	F-2	Q23	H-2	Q94	M-14	RV21	I-14
DL3	H-2	Q24	H-3	Q95	L-11	RV22	N-10
DL4	J-2	Q25	I-2	Q96	L-13	RV23	K-8
DL5	H-13	Q26	I-2	Q98	M-11	RV24	N-9
DL6	M-15	Q27	I-1	Q99	L-11	RV25	N-7
DL7	M-15	Q28	J-2	Q100	M-11	RV26	N-7
DL8	L-14	Q29	J-2	Q101	M-12	RV27	F-9
DL10	M-12	Q30	K-2	Q102	D-13	RV28	N-10
		Q31	K-3	Q103	D-14	RV29	N-11
D1	C-2	Q32	N-3	Q104	E-14	RV30	G-14
D2	C-2	Q33	M-4	Q105	F-15	RV31	L-11
D3	C-1	Q34	C-9	Q106	E-14	RV32	J-9
D4	C-3	Q35	D-10	Q107	E-13		
D5	I-1	Q36	C-9	Q108	F-13	S1	L-6
D6	I-2	Q37	D-9	Q109	F-14	S2	M-6
D7	J-2	Q38	C-9	Q110	G-13	S3	L-12
D8	M-3	Q39	D-9	Q111	G-13	S4	N-12
D9	M-3	Q40	C-9	Q112	G-14		
D10	K-3	Q41	F-8	Q113	H-13	TP1	E-3
D13	M-6	Q42	F-9	Q114	J-14	TP2	D-4
D14	K-9	Q43	F-9	Q115	H-14	TP3	J-3
		Q44	G-9	Q116	J-14	TP4	J-4
E1	E-4	Q45	I-9	Q117	H-14	TP5	M-5
E2	K-3	Q46	I-9	Q118	H-13	TP6	J-12
E3	N-15	Q47	G-9	Q119	H-13	TP7	K-11
		Q48	G-8	Q120	K-10	TP8	J-11
FL1	F-3	Q49	G-9	Q121	K-10	TP9	I-15
FL2	H-3	Q50	G-8	Q123	L-11	TP10	J-15
FL3	M-10	Q51	E-4	Q124	K-10	TP11	G-15
		Q52	E-4	Q126	M-10	TP12	N-13
IC1	D-3	Q53	E-3	Q127	L-9	TP13	L-11
IC2	C-7	Q54	F-4	Q128	L-8	TP14	M-10
IC3	D-7	Q55	F-4	Q129	L-9	TP15	K-7
IC5	L-2	Q56	G-4	Q130	M-10	TP16	M-7
IC6	M-2	Q57	G-4	Q131	K-8	TP17	K-7
IC8	D-7	Q58	G-4	Q133	M-9	TP18	N-15
IC9	H-8	Q59	H-4	Q134	K-10	TP19	N-14
IC10	C-11	Q60	H-4	Q135	K-8	TP20	N-13
IC11	D-11	Q61	I-5	Q136	K-8	TP21	D-1
IC12	D-12	Q62	I-4	Q138	J-7		
IC13	I-13	Q63	J-3	Q139	L-7		
IC14	L-8	Q64	J-5	Q141	L-7		
IC15	M-6	Q65	J-4	Q143	M-8		
IC16	C-16	Q66	K-4	Q145	M-7		
IC17	C-15	Q67	K-4	Q146	L-7		
IC18	D-15	Q68	K-4	Q147	L-6		
		Q69	L-4	Q148	M-6		
Q1	C-2	Q70	M-4	Q149	J-9		
Q2	C-1	Q71	N-4	Q150	M-11		
Q3	C-4	Q72	B-12	Q151	J-5		
Q4	B-7	Q73	B-11	Q152	K-5		
Q5	C-6	Q74	C-13	Q153	D-14		
Q6	F-6	Q75	F-10	Q154	M-8		
Q7	E-6	Q76	E-10	Q155	M-9		
Q8	E-7	Q77	E-12	Q156	L-9		
Q9	F-6	Q78	F-11	Q157	N-8		
Q10	F-6	Q79	F-10				
Q11	F-6	Q80	F-11	RV1	D-1		
Q12	G-6	Q81	G-11	RV2	H-6		
Q13	F-7	Q82	F-12	RV7	H-2		
Q14	H-6	Q83	H-11	RV9	I-9		
Q15	H-6	Q84	H-11	RV10	H-9		
Q16	H-6	Q85	H-11	RV11	I-5		

C-40 (d)

BVP-370/P



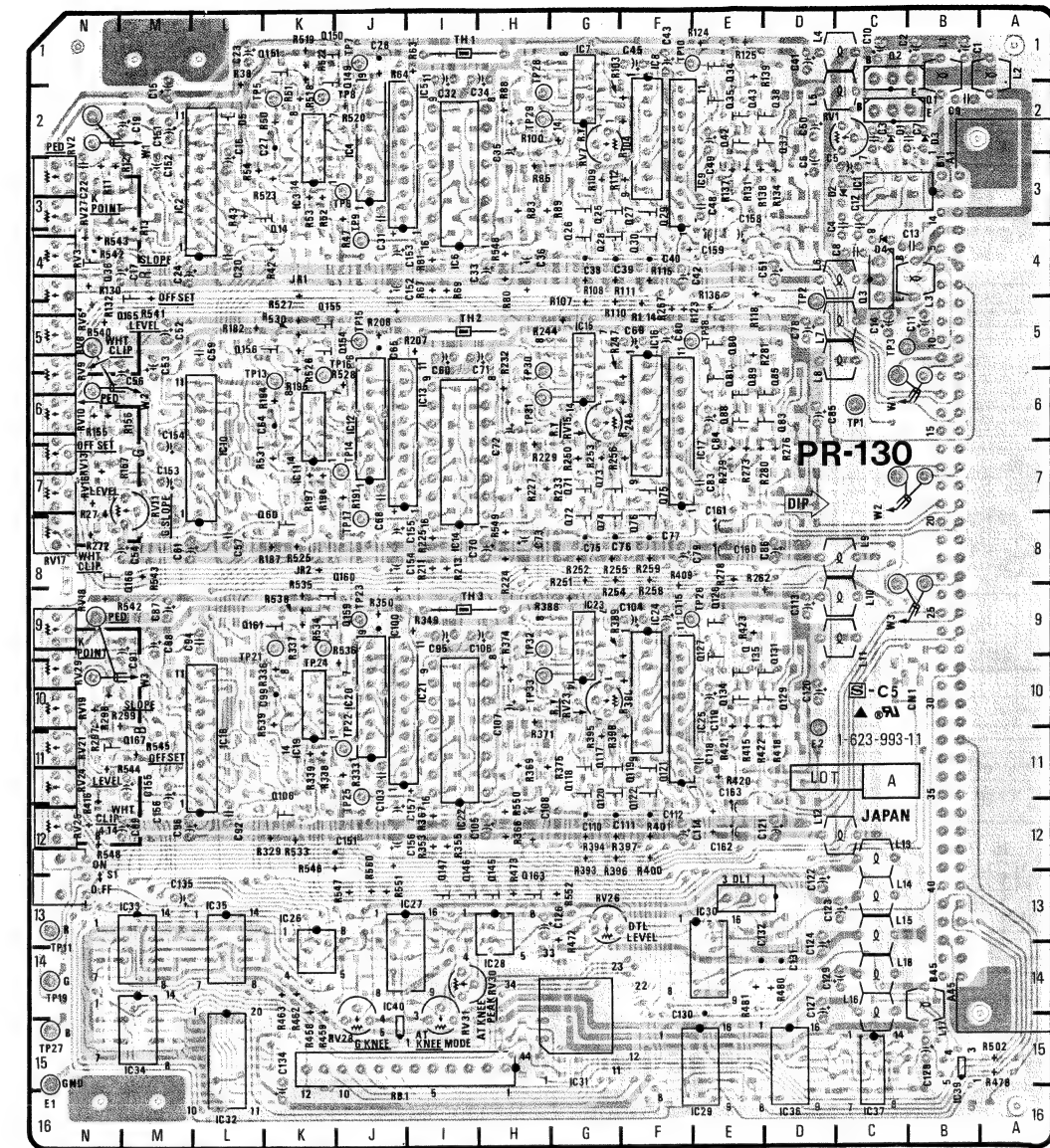


IE-26/26P BOARD

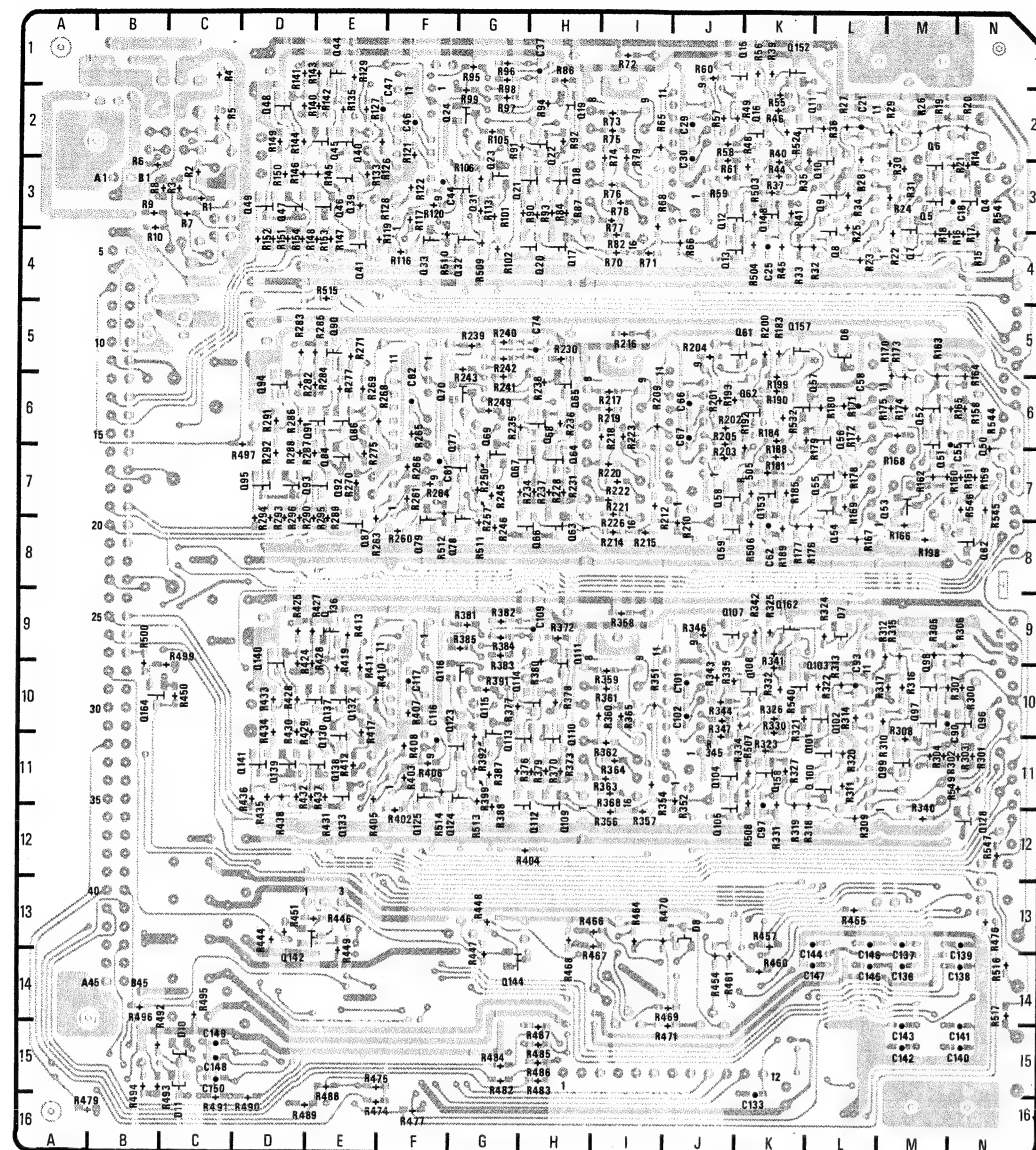
BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)

PR-130 BOARD

Serial No. 10001 - 10210 (UC)
30001 - 30205 (J)
40001 - 40210 (AE)



1-632-993-11 COMPONENT SIDE



1-632-993-11 SOLDERING SIDE

PR-130 1-632-993-11

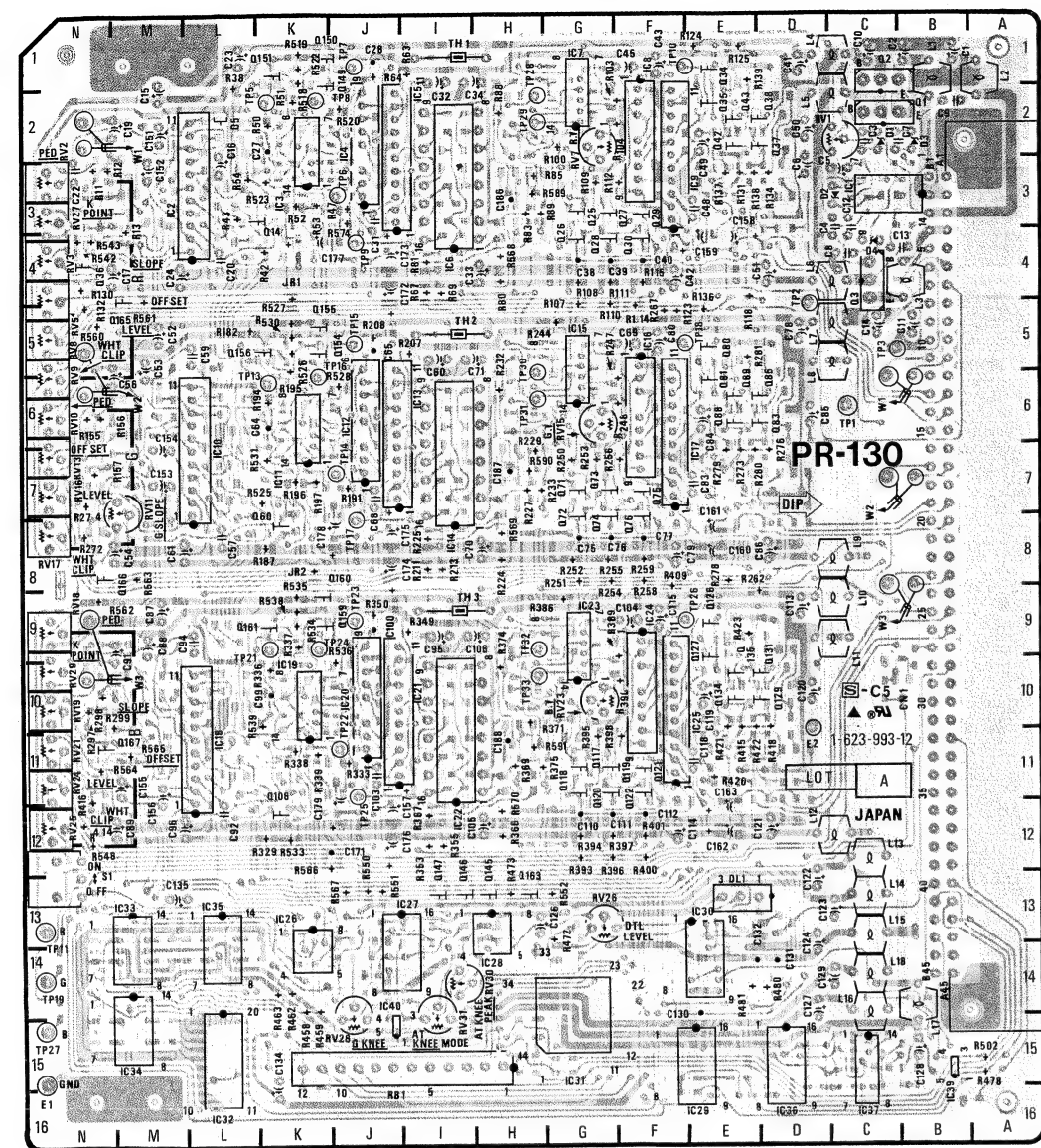
CN1	B-10	Q13	J-4	Q83	D-6	Q154	J-5	TP25	J-11
		Q14	K-3	Q84	E-7	Q155	K-5	TP26	E-9
DL1	E-13	Q15	J-1	Q85	D-6	Q156	L-5	TP27	N-15
		Q16	K-2	Q86	E-6	Q157	K-3	TP28	H-1
D1	C-2	Q17	H-4	Q87	E-8	Q158	K-11	TP29	H-2
D2	C-3	Q18	H-3	Q88	E-6	Q159	J-9	TP30	H-5
D3	B-2	Q19	H-2	Q89	E-6	Q160	J-8	TP31	H-6
D4	C-4	Q20	H-4	Q90	E-5	Q161	L-9	TP32	H-9
D5	L-2	Q21	G-3	Q91	D-6	Q162	K-9	TP33	H-10
D6	L-5	Q22	H-2	Q92	E-7	Q163	H-13		
D7	L-9	Q23	G-3	Q93	D-7	Q164	B-10		
D8	J-13	Q24	F-2	Q94	D-6	Q165	M-5		
D10	C-15	Q25	G-3	Q95	D-7	Q166	M-6		
D11	C-16	Q26	G-4	Q96	N-10	Q167	M-11		
		Q27	F-3	Q97	M-10				
E1	N-16	Q28	G-4	Q98	M-9	RB1	J-16		
E2	D-11	Q29	F-3	Q99	M-11				
		Q30	F-4	Q100	L-11	RV1	C-2		
IC1	C-3	Q31	G-3	Q101	L-11	RV2	N-2		
IC2	M-3	Q32	G-4	Q102	L-10	RV3	N-4		
IC3	K-3	Q33	F-4	Q103	L-10	RV5	N-5		
IC4	J-2	Q34	E-1	Q104	J-11	RV7	G-2		
IC5	I-2	Q35	E-2	Q105	J-12	RV8	N-5		
IC6	I-4	Q36	N-4	Q106	K-11	RV9	N-6		
IC7	G-1	Q37	D-2	Q107	J-9	RV10	N-6		
IC8	F-1	Q38	D-2	Q108	K-10	RV11	M-7		
IC9	E-3	Q39	E-3	Q109	H-12	RV13	N-7		
IC10	L-7	Q40	E-2	Q110	H-11	RV15	G-6		
IC11	K-7	Q41	E-4	Q111	H-9	RV16	N-7		
IC12	J-6	Q42	E-2	Q112	H-12	RV17	N-8		
IC13	I-6	Q43	E-2	Q113	G-11	RV18	N-9		
IC14	I-8	Q44	E-1	Q114	G-10	RV19	N-10		
IC15	G-5	Q45	E-2	Q115	G-10	RV21	N-11		
IC16	F-5	Q46	E-3	Q116	F-10	RV23	G-10		
IC17	E-7	Q47	D-3	Q117	G-11	RV24	N-11		
IC18	L-11	Q48	D-2	Q118	G-11	RV25	N-12		
IC19	K-11	Q49	D-3	Q119	F-11	RV26	G-13		
IC20	J-10	Q50	N-6	Q120	G-11	RV27	N-3		
IC21	I-10	Q51	M-7	Q121	F-11	RV28	J-15		
IC22	I-12	Q52	M-6	Q122	F-11	RV29	N-10		
IC23	G-9	Q53	M-7	Q123	F-10	RV30	H-14		
IC24	F-9	Q54	L-8	Q124	G-12	RV31	I-15		
IC25	E-10	Q55	L-7	Q125	F-12				
IC26	K-13	Q56	L-6	Q126	E-9	S1	N-12		
IC27	I-13	Q57	K-6	Q127	E-9				
IC28	H-14	Q58	J-7	Q128	N-12	TH1	I-1		
IC29	E-16	Q59	J-8	Q129	D-10	TH2	I-5		
IC30	E-13	Q60	K-7	Q130	E-11	TH3	I-9		
IC31	G-15	Q61	K-5	Q131	D-9				
IC32	L-16	Q62	K-6	Q132	E-10	TP1	C-6		
IC33	M-13	Q63	H-8	Q133	E-12	TP2	D-5		
IC34	M-15	Q64	H-7	Q134	E-10	TP3	C-5		
IC35	L-13	Q65	H-6	Q135	E-9	TP5	L-2		
IC36	D-16	Q66	H-8	Q136	E-9	TP6	J-3		
IC37	C-16	Q67	G-7	Q137	E-10	TP7	J-1		
IC39	B-15	Q68	H-6	Q138	E-11	TP8	J-2		
IC40	J-14	Q69	G-6	Q139	D-11	TP9	J-3		
		Q70	F-6	Q140	D-9	TP10	F-1		
Q1	B-2	Q71	G-7	Q141	D-11	TP11	N-13		
Q2	C-1	Q72	G-8	Q142	D-14	TP13	L-6		
Q3	C-4	Q73	G-7	Q144	G-14	TP14	J-7		
Q4	N-1	Q74	G-8	Q145	H-12	TP15	J-5		
Q5	M-3	Q75	F-7	Q146	I-12	TP16	J-5		
Q6	M-2	Q76	F-8	Q147	I-12	TP17	J-8		
Q7	M-4	Q77	F-6	Q148	K-3	TP18	E-5		
Q8	L-4	Q78	F-8	Q149	J-1	TP19	N-14		
Q9	L-3	Q79	F-8	Q150	K-1	TP21	L-9		
Q10	L-3	Q80	E-5	Q151	K-1	TP22	J-10		
Q11	K-2	Q81	E-6	Q152	K-1	TP23	J-9		
Q12	J-3	Q82	N-8	Q153	K-7	TP24	K-10		

C-47 (a)

C-48 (a)

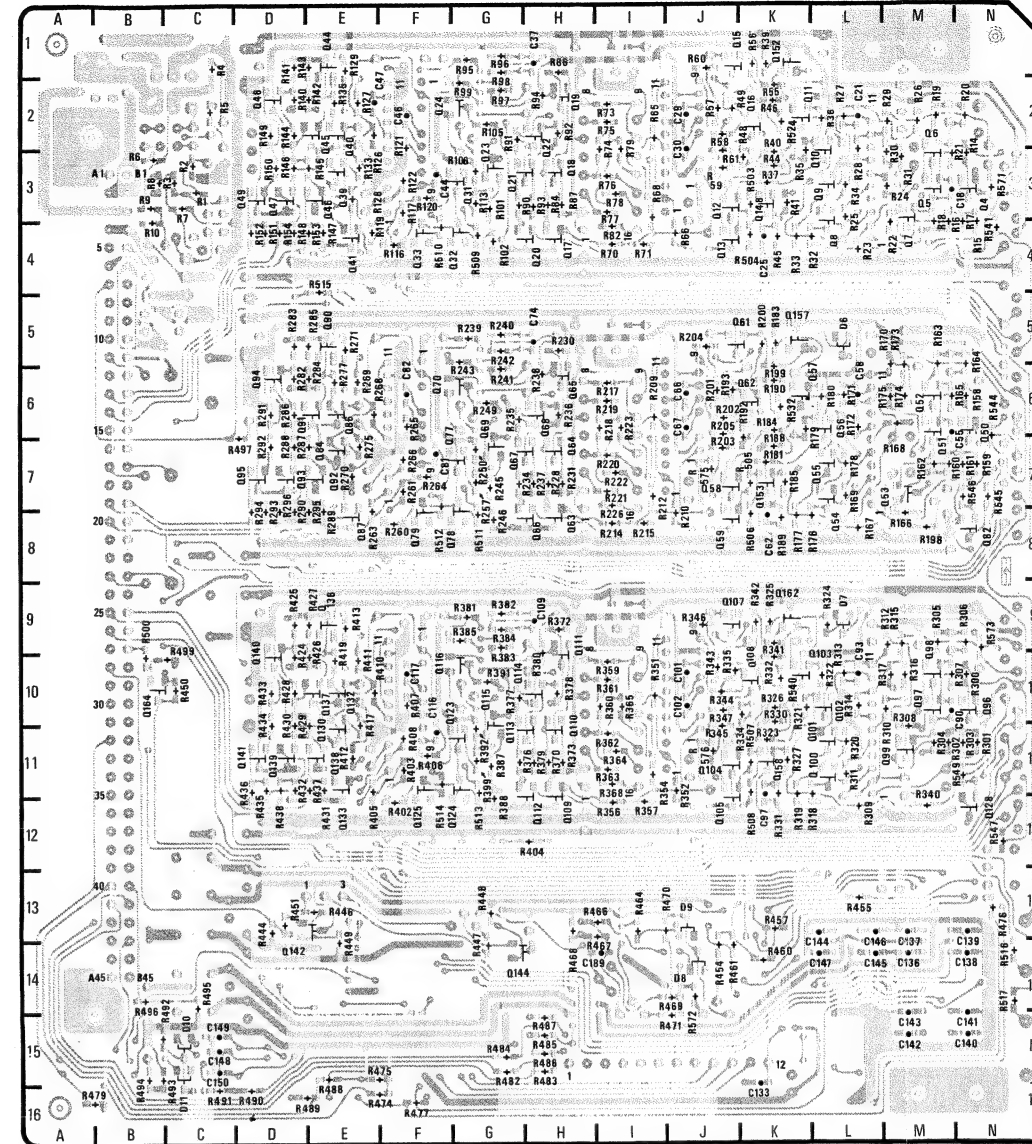
PR-130 BOARD

Serial No. 10301 - 10500 (UC)
30301 - 30400 (J)
40301 - 40600 (AE)



1-632-993-12 COMPONENT SIDE

C-46 (b)



1-632-993-12 SOLDERING SIDE

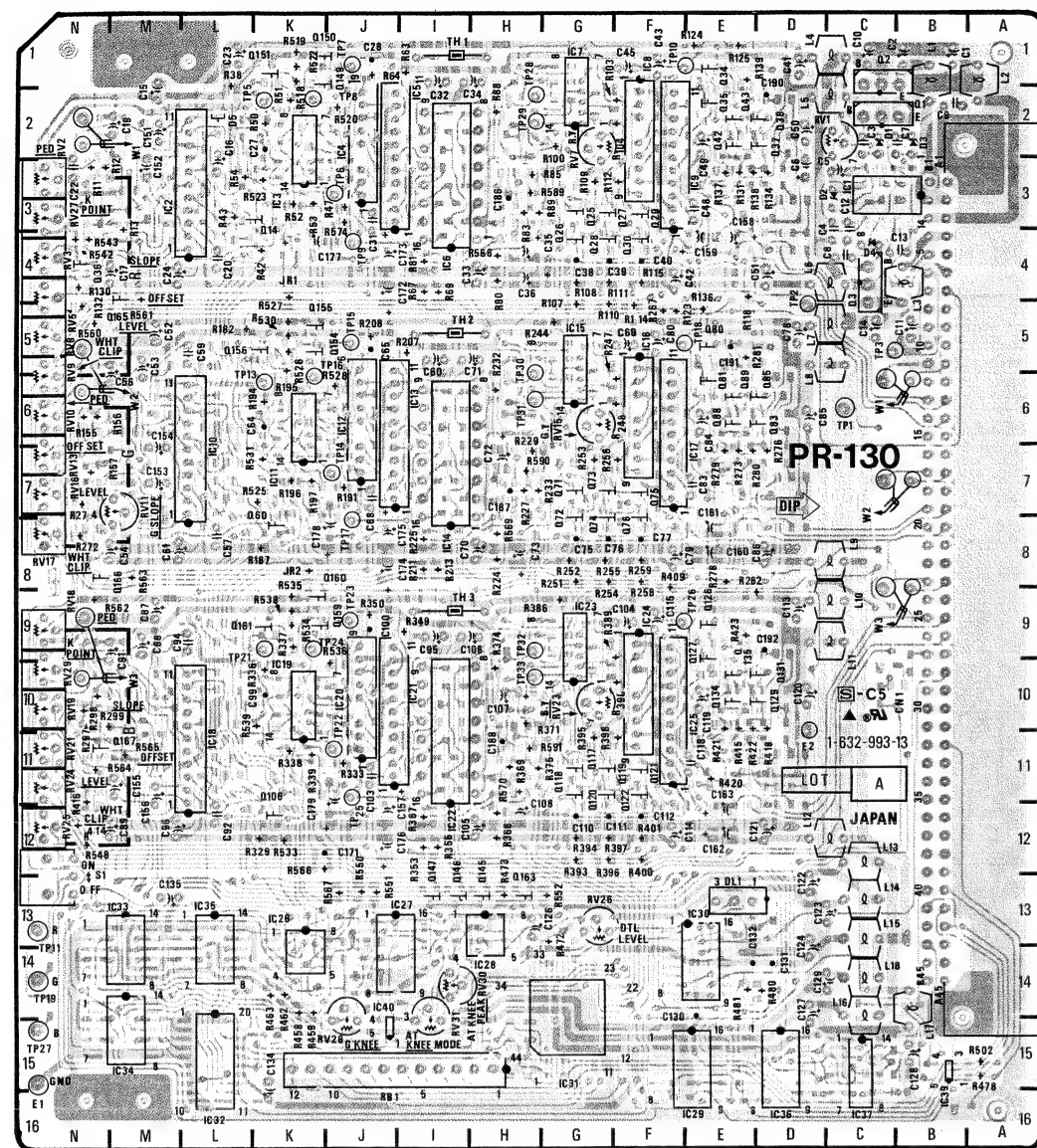
C-47 (b)

PR-130 1-

CN1	E
DL1	E
D1	C
D2	C
D3	E
D4	C
D5	L
D6	L
D7	L
D8	L
D9	L
D10	L
D11	C
E1	N
E2	L
IC1	C
IC2	M
IC3	F
IC4	L
IC5	L
IC6	L
IC7	C
IC8	F
IC9	E
IC10	L
IC11	L
IC12	L
IC13	L
IC14	L
IC15	C
IC16	F
IC17	E
IC18	L
IC19	F
IC20	L
IC21	L
IC22	L
IC23	C
IC24	F
IC25	E
IC26	L
IC27	L
IC28	F
IC29	E
IC30	E
IC31	C
IC32	L
IC33	M
IC34	M
IC35	L
IC36	L
IC37	C
IC39	E
IC40	L
Q1	L
Q2	C
Q3	C
Q4	L
Q5	L
Q6	L
Q7	L
Q8	L
Q9	L
Q10	L
Q11	L

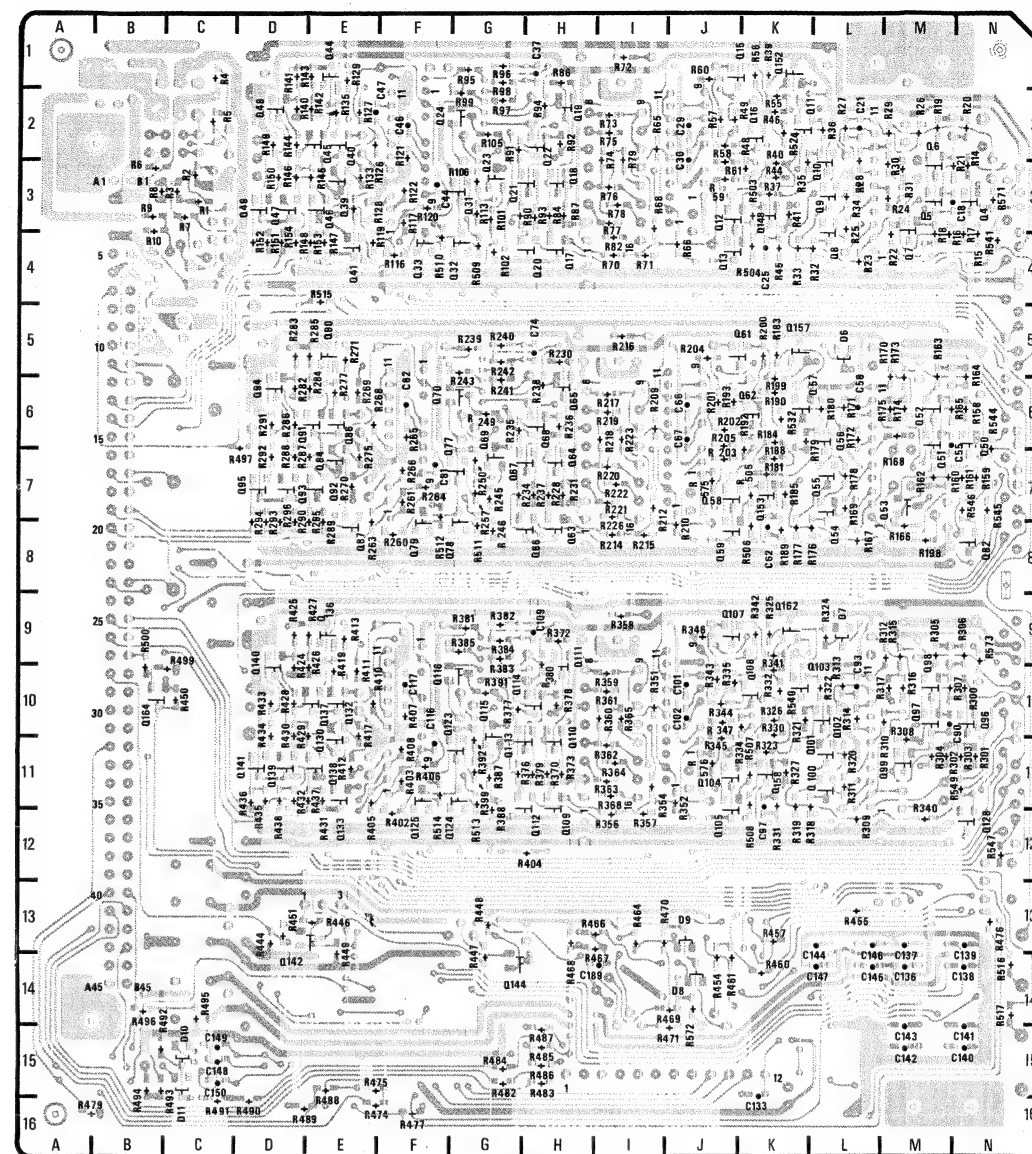
PR-130 BOARD

Serial No. 10501 - 10800 (UC)
30401 - 30600 (J)
40601 - 40900 (AE)



1-632-993-13 COMPONENT SIDE

C-46 (c)



1-632-993-13 SOLDERING SIDE

C-47 (c)

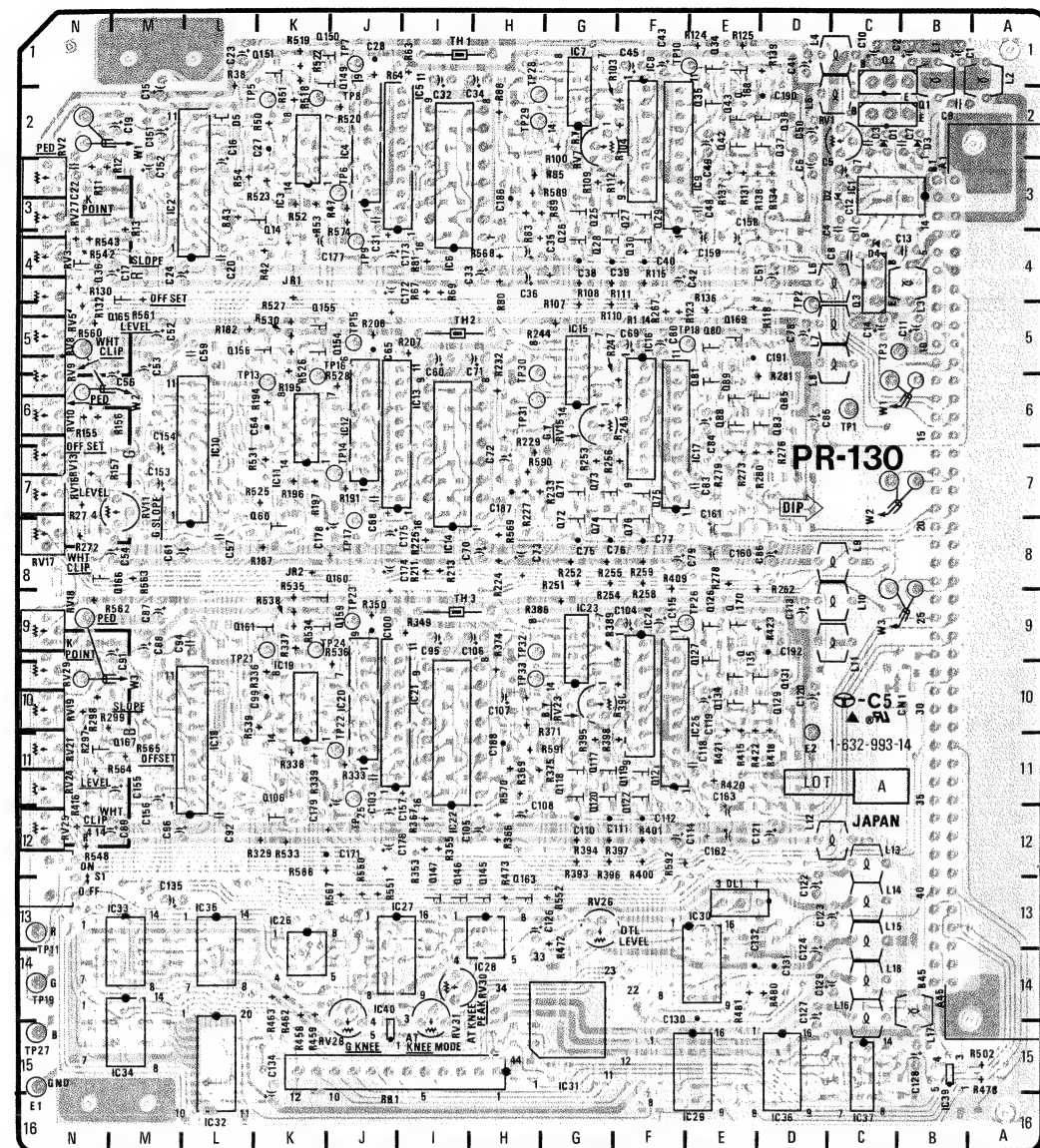
PR-130 1-

DN1	E
DL1	E
D1	C
D2	C
D3	E
D4	C
D5	L
D6	L
D7	L
D8	C
D9	C
D10	C
D11	C
E1	M
E2	D
IC1	C
IC2	M
IC3	J
IC4	J
IC5	J
IC6	J
IC7	G
IC8	F
IC9	E
IC10	L
IC11	K
IC12	J
IC13	J
IC14	J
IC15	C
IC16	F
IC17	E
IC18	L
IC19	K
IC20	J
IC21	J
IC22	J
IC23	G
IC24	F
IC25	E
IC26	K
IC27	J
IC28	F
IC29	E
IC30	E
IC31	G
IC32	L
IC33	M
IC34	N
IC35	L
IC36	C
IC37	C
IC39	E
IC40	J

Q1	E
Q2	C
Q3	C
Q4	M
Q5	M
Q6	M
Q7	M
Q8	L
Q9	L
Q10	L
Q11	K

PR-130 BOARD

Serial No. 10801 - (UC)
30601 - (J)
40901 - (AE)



1-632-993-14 COMPONENT SIDE

C-46 (d)



1-632-993-14 SOLDERING SIDE

C-47 (d)

PR-130 1

CN1

DL1

D1

D2

D3

D4

D5

D6

D7

D8

D9

D10

D11

E1

E2

IC1

IC2

IC3

IC4

IC5

IC6

IC7

IC8

IC9

IC10

IC11

IC12

IC13

IC14

IC15

IC16

IC17

IC18

IC19

IC20

IC21

IC22

IC23

IC24

IC25

IC26

IC27

IC28

IC29

IC30

IC31

IC32

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IC34

IC35

IC36

IC37

IC39

IC40

Q1

Q2

Q3

Q4

Q5

Q6

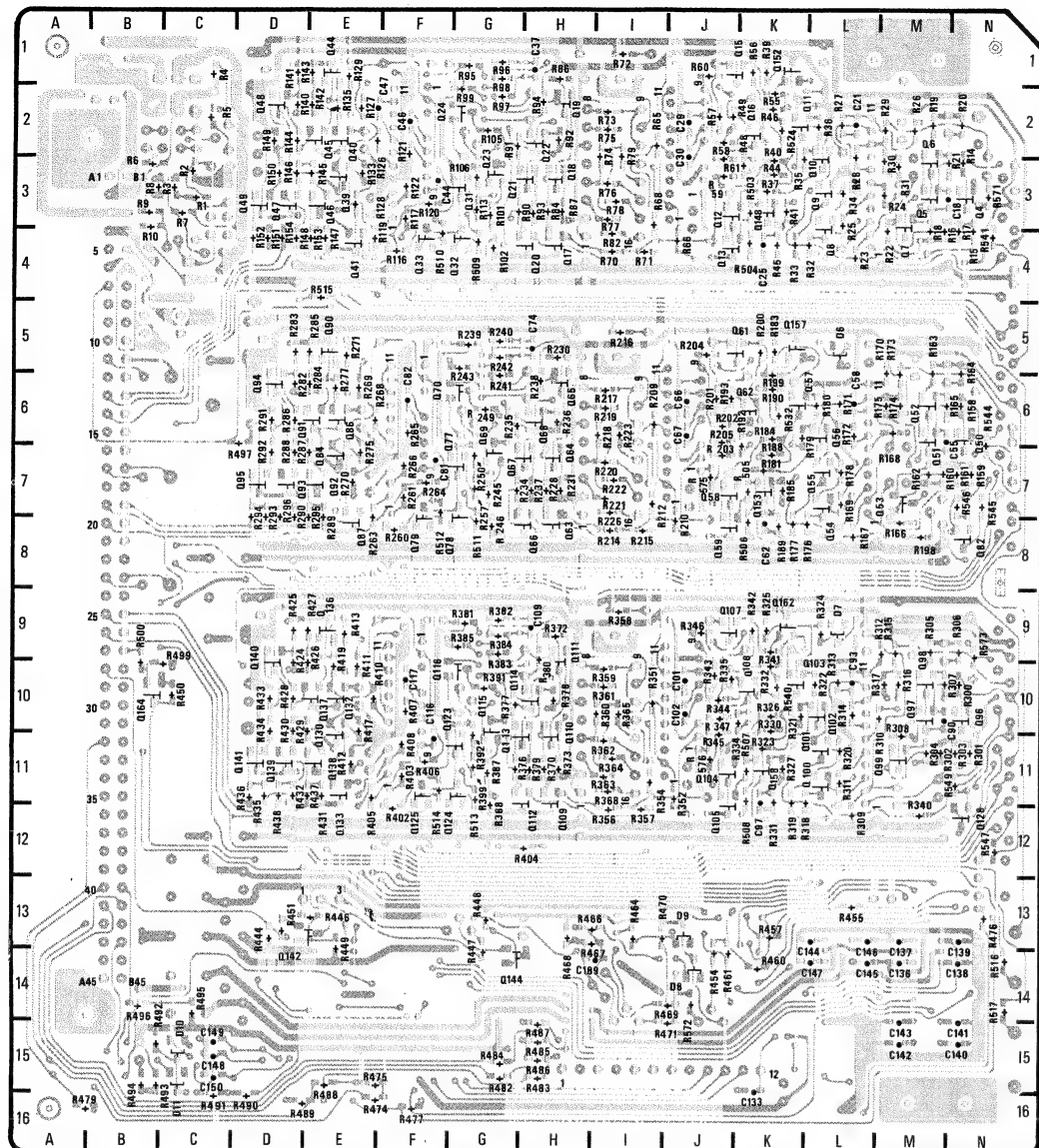
Q7

Q8

Q9

Q10

Q11



1-632-993-13 SOLDERING SIDE

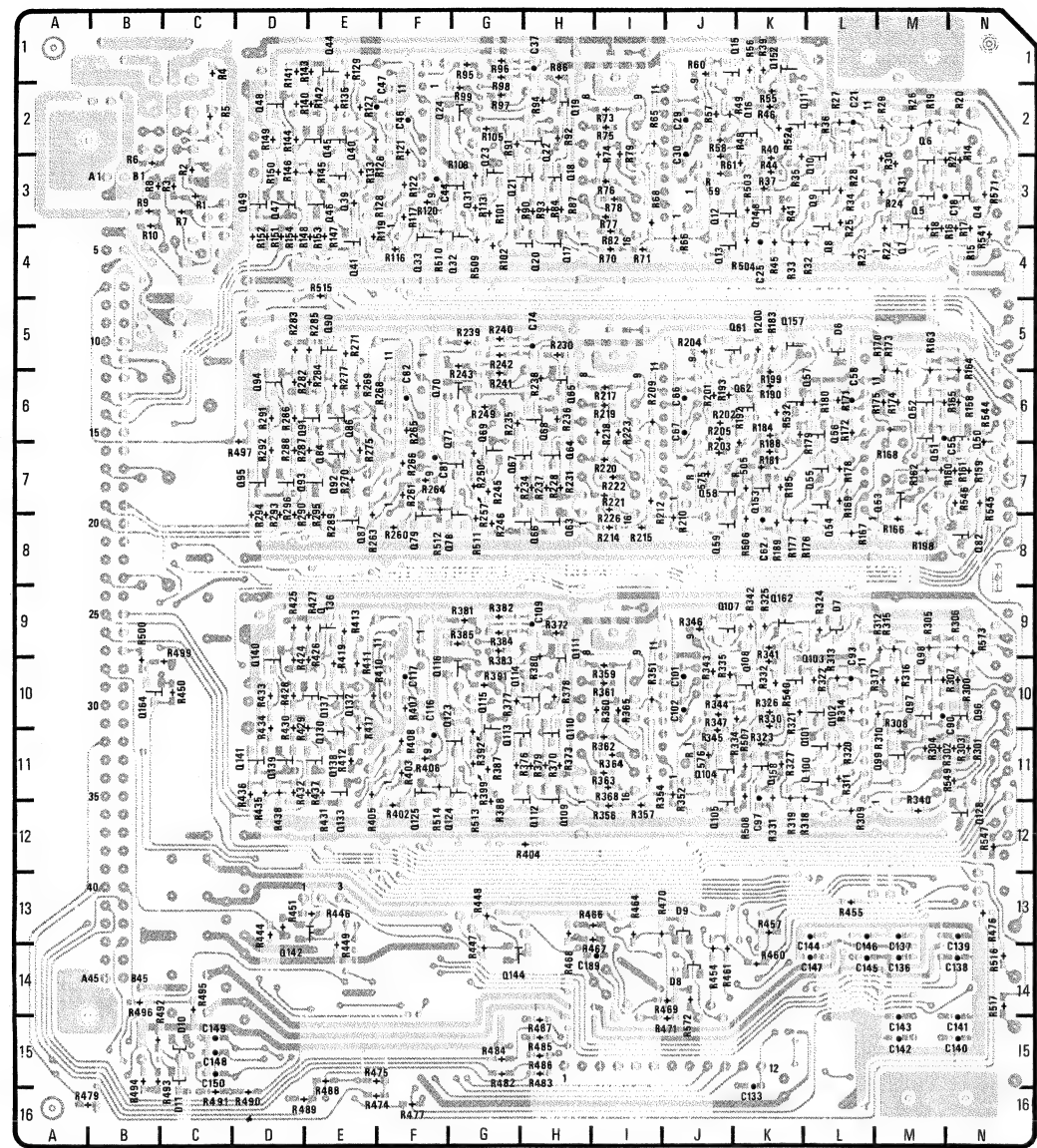
C-47 (c)

PR-130 1-632-993-13

CN1	B-10	Q12	J-3	Q82	N-8	Q153	K-7	TP21	K-9
		Q13	J-4	Q83	D-6	Q154	J-5	TP22	J-11
DL1	E-13	Q14	K-3	Q84	E-7	Q155	L-5	TP23	J-9
		Q15	J-1	Q85	D-6	Q156	K-5	TP24	K-9
D1	C-2	Q16	K-2	Q86	E-6	Q157	K-5	TP25	J-12
D2	C-3	Q17	H-4	Q87	E-8	Q158	K-11	TP26	E-9
D3	B-2	Q18	H-3	Q88	E-6	Q159	J-9	TP27	N-15
D4	C-4	Q19	H-2	Q89	E-6	Q160	J-8	TP28	H-1
D5	L-2	Q20	H-4	Q90	E-5	Q161	L-9	TP29	H-2
D6	L-5	Q21	G-3	Q91	D-6	Q162	K-9	TP30	H-6
D7	L-9	Q22	H-2	Q92	E-7	Q163	H-13	TP31	H-6
D8	J-14	Q23	G-3	Q93	D-7	Q164	B-10	TP32	H-9
D9	J-13	Q24	F-2	Q94	D-6	Q165	M-5	TP33	H-10
D10	C-15	Q25	G-3	Q95	D-7	Q166	M-8		
D11	C-16	Q26	G-4	Q96	N-10	Q167	M-11		
		Q27	F-3	Q97	M-10	Q168	E-2		
E1	N-16	Q28	G-4	Q98	M-10	Q169	E-6		
E2	D-11	Q29	F-3	Q99	M-11	Q170	E-10		
		Q30	F-4	Q100	L-11				
IC1	C-3	Q31	G-3	Q101	L-11	RB1	J-16		
IC2	M-3	Q32	G-4	Q102	L-10				
IC3	K-3	Q33	F-4	Q103	L-10	RV1	C-2		
IC4	J-2	Q34	E-1	Q104	J-11	RV2	N-2		
IC5	I-2	Q35	E-2	Q105	J-12	RV3	N-4		
IC6	I-4	Q36	N-4	Q106	K-11	RV5	N-5		
IC7	G-1	Q37	D-2	Q107	J-9	RV7	G-2		
IC8	F-1	Q38	D-2	Q108	K-10	RV8	N-5		
IC9	E-3	Q39	E-3	Q109	H-12	RV9	N-5		
IC10	L-7	Q40	E-2	Q110	H-11	RV10	N-6		
IC11	K-7	Q41	E-4	Q111	H-9	RV11	M-7		
IC12	J-6	Q42	E-2	Q112	H-12	RV13	N-7		
IC13	I-6	Q43	E-2	Q113	G-11	RV15	G-6		
IC14	I-8	Q44	E-1	Q114	G-10	RV16	N-7		
IC15	G-5	Q45	E-2	Q115	G-10	RV17	N-8		
IC16	F-5	Q46	E-3	Q116	F-10	RV18	N-9		
IC17	E-7	Q47	D-3	Q117	G-11	RV19	N-10		
IC18	L-11	Q48	D-2	Q118	G-11	RV21	N-11		
IC19	K-10	Q49	D-3	Q119	F-11	RV23	G-10		
IC20	J-10	Q50	N-6	Q120	G-11	RV24	N-11		
IC21	I-10	Q51	M-7	Q121	F-11	RV25	N-12		
IC22	I-12	Q52	M-6	Q122	F-11	RV26	G-13		
IC23	G-9	Q53	M-7	Q123	F-10	RV27	N-3		
IC24	F-9	Q54	L-8	Q124	F-12	RV28	J-15		
IC25	E-10	Q55	L-7	Q125	F-12	RV29	N-10		
IC26	K-13	Q56	L-6	Q126	E-9	RV30	H-14		
IC27	I-13	Q57	L-6	Q127	E-9	RV31	I-15		
IC28	H-14	Q58	J-7	Q128	N-12				
IC29	E-16	Q59	J-8	Q129	D-10	S1	N-13		
IC30	E-13	Q60	K-8	Q130	E-11				
IC31	G-15	Q61	J-5	Q131	D-9	TH1	I-1		
IC32	L-16	Q62	K-6	Q132	E-10	TH2	I-5		
IC33	M-13	Q63	H-8	Q133	E-12	TH3	I-9		
IC34	M-15	Q64	H-7	Q134	E-10				
IC35	L-13	Q65	H-6	Q135	E-10	TP1	C-6		
IC36	D-16	Q66	H-8	Q136	E-9	TP2	D-4		
IC37	C-16	Q67	G-7	Q137	E-10	TP3	C-5		
IC39	B-15	Q68	H-6	Q138	E-11	TP5	L-2		
IC40	J-14	Q69	G-6	Q139	D-11	TP6	J-3		
		Q70	F-6	Q140	D-10	TP7	J-1		
Q1	B-2	Q71	G-7	Q141	D-11	TP8	J-2		
Q2	C-1	Q72	G-8	Q142	D-14	TP9	J-4		
Q3	C-4	Q73	G-7	Q144	G-14	TP10	F-1		
Q4	N-3	Q74	G-8	Q145	H-13	TP11	N-13		
Q5	M-3	Q75	F-7	Q146	I-13	TP13	K-6		
Q6	M-2	Q76	F-8	Q147	I-13	TP14	J-7		
Q7	M-4	Q77	G-7	Q148	K-3	TP15	J-5		
Q8	L-4	Q78	G-8	Q149	J-1	TP16	J-5		
Q9	L-3	Q79	F-8	Q150	K-1	TP17	J-8		
Q10	L-3	Q80	E-5	Q151	K-1	TP18	E-5		
Q11	K-2	Q81	E-6	Q152	K-1	TP19	N-14		

C-48 (c)

BVP-370/P



1-632-993-12 SOLDERING SIDE

PR-130 1-632-993-12

CN1	B-10	Q12	J-3	Q82	N-8	Q153	K-7	TP24	J-9
		Q13	J-4	Q83	D-6	Q154	J-5	TP25	J-12
DL1	E-13	Q14	K-3	Q84	E-7	Q155	K-5	TP26	E-9
		Q15	J-1	Q85	D-6	Q156	L-5	TP27	N-15
D1	C-2	Q16	K-2	Q86	E-6	Q157	K-3	TP28	H-1
D2	C-3	Q17	H-4	Q87	E-8	Q158	K-11	TP29	H-2
D3	B-2	Q18	H-3	Q88	E-6	Q159	J-9	TP30	H-5
D4	C-4	Q19	H-2	Q89	E-6	Q160	J-8	TP31	H-6
D5	L-2	Q20	H-4	Q90	E-5	Q161	L-9	TP32	H-9
D6	L-5	Q21	G-3	Q91	D-6	Q162	K-9	TP33	H-10
D7	L-9	Q22	H-2	Q92	E-7	Q163	H-13		
D8	J-14	Q23	G-3	Q93	D-7	Q164	B-10		
D9	J-13	Q24	F-2	Q94	D-6	Q165	M-5		
D10	C-15	Q25	G-3	Q95	D-7	Q166	M-6		
D11	C-16	Q26	G-4	Q96	N-10	Q167	M-11		
		Q27	F-3	Q97	M-10				
E1	N-16	Q28	G-4	Q98	M-9	RB1	J-16		
E2	D-11	Q29	F-3	Q99	M-11				
		Q30	F-4	Q100	L-11	RV1	C-2		
IC1	C-3	Q31	G-3	Q101	L-11	RV2	N-2		
IC2	M-3	Q32	G-4	Q102	L-10	RV3	N-4		
IC3	K-3	Q33	F-4	Q103	L-10	RV5	N-5		
IC4	J-2	Q34	E-1	Q104	J-11	RV7	G-2		
IC5	I-2	Q35	E-2	Q105	J-12	RV8	N-5		
IC6	I-4	Q36	N-4	Q106	K-11	RV9	N-6		
IC7	G-1	Q37	D-2	Q107	J-9	RV10	N-6		
IC8	F-1	Q38	D-2	Q108	K-10	RV11	M-7		
IC9	E-3	Q39	E-3	Q109	H-12	RV13	N-7		
IC10	L-7	Q40	E-2	Q110	H-11	RV15	G-6		
IC11	K-7	Q41	E-4	Q111	H-9	RV16	N-7		
IC12	J-6	Q42	E-2	Q112	H-12	RV17	N-8		
IC13	I-6	Q43	E-2	Q113	G-11	RV18	N-9		
IC14	I-8	Q44	E-1	Q114	G-10	RV19	N-10		
IC15	G-5	Q45	E-2	Q115	G-10	RV21	N-11		
IC16	F-5	Q46	E-3	Q116	F-10	RV23	G-10		
IC17	E-7	Q47	D-3	Q117	G-11	RV24	N-11		
IC18	L-11	Q48	D-2	Q118	G-11	RV25	N-12		
IC19	K-10	Q49	D-3	Q119	F-11	RV26	G-13		
IC20	J-10	Q50	N-6	Q120	G-11	RV27	N-3		
IC21	I-10	Q51	M-7	Q121	F-11	RV28	J-15		
IC22	I-12	Q52	M-6	Q122	F-11	RV29	N-10		
IC23	G-9	Q53	M-7	Q123	F-10	RV30	H-14		
IC24	F-9	Q54	L-8	Q124	G-12	RV31	I-15		
IC25	E-10	Q55	L-7	Q125	F-12				
IC26	K-13	Q56	L-6	Q126	E-9	S1	N-12		
IC27	I-13	Q57	K-6	Q127	E-9				
IC28	H-14	Q58	J-7	Q128	N-12	TH1	I-1		
IC29	E-16	Q59	J-8	Q129	D-10	TH2	I-5		
IC30	E-13	Q60	K-7	Q130	E-11	TH3	I-9		
IC31	G-15	Q61	K-5	Q131	D-9				
IC32	L-16	Q62	K-6	Q132	E-10	TP1	C-6		
IC33	M-13	Q63	H-8	Q133	E-12	TP2	D-5		
IC34	M-15	Q64	H-7	Q134	E-10	TP3	C-5		
IC35	L-13	Q65	H-6	Q135	E-9	TP5	L-2		
IC36	D-16	Q66	H-8	Q136	E-9	TP6	J-3		
IC37	C-16	Q67	G-7	Q137	E-10	TP7	J-1		
IC39	B-15	Q68	H-6	Q138	E-11	TP8	J-2		
IC40	J-14	Q69	G-6	Q139	D-11	TP9	J-4		
		Q70	F-6	Q140	D-9	TP10	F-1		
Q1	B-2	Q71	G-7	Q141	D-11	TP11	N-13		
Q2	C-1	Q72	G-8	Q142	D-14	TP13	L-6		
Q3	C-4	Q73	G-7	Q144	G-14	TP14	J-7		
Q4	N-1	Q74	G-8	Q145	H-12	TP15	J-5		
Q5	M-3	Q75	F-7	Q146	I-12	TP16	J-5		
Q6	M-2	Q76	F-8	Q147	I-12	TP17	J-8		
Q7	M-4	Q77	F-6	Q148	K-3	TP18	E-5		
Q8	L-4	Q78	F-8	Q149	J-1	TP19	N-14		
Q9	L-3	Q79	F-8	Q150	K-1	TP21	L-9		
Q10	L-3	Q80	E-5	Q151	K-1	TP22	J-10		
Q11	K-2	Q81	E-6	Q152	K-1	TP23	J-9		

C-47 (b)

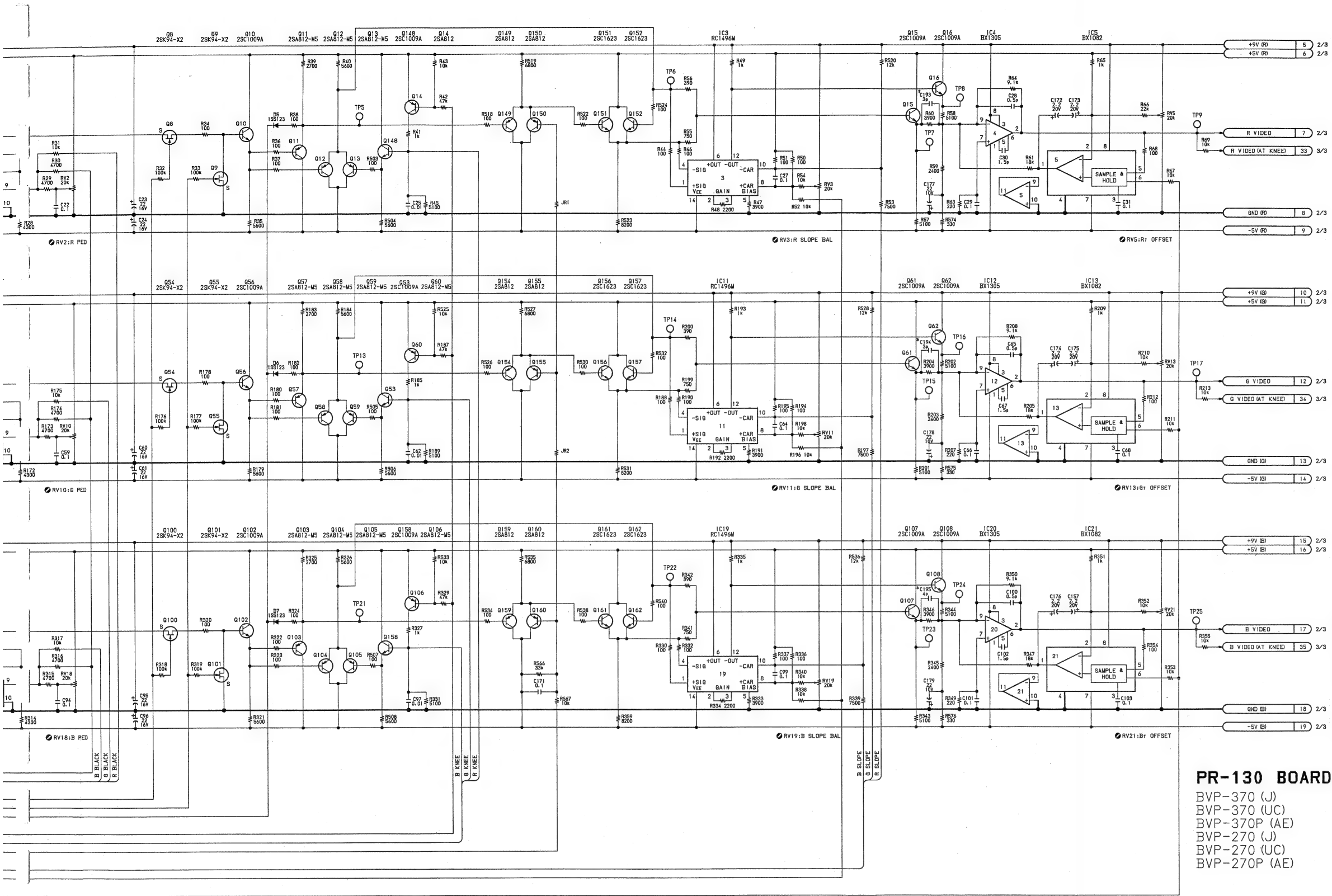
C-48 (b)



1-632-993-14 SOLDERING SIDE

PR-130 1-632-993-14

CN1	B-10	Q12	J-3	Q82	N-8	Q153	R-7	TP21	K-9
		Q13	J-4	Q83	D-6	Q154	J-5	TP22	J-11
DL1	E-13	Q14	K-3	Q84	E-7	Q155	L-5	TP23	J-9
		Q15	J-1	Q85	D-6	Q156	K-5	TP24	K-9
D1	C-2	Q16	K-2	Q86	E-6	Q157	K-5	TP25	J-12
D2	C-3	Q17	H-4	Q87	E-8	Q158	K-11	TP26	E-9
D3	B-2	Q18	H-3	Q88	E-6	Q159	J-9	TP27	N-15
D4	C-4	Q19	H-2	Q89	E-6	Q160	J-8	TP28	H-1
D5	L-2	Q20	H-4	Q90	E-5	Q161	L-9	TP29	H-2
D6	L-5	Q21	G-3	Q91	D-6	Q162	K-9	TP30	H-6
D7	L-9	Q22	H-2	Q92	E-7	Q163	H-13	TP31	H-6
D8	J-14	Q23	G-3	Q93	D-7	Q164	B-10	TP32	H-9
D9	J-13	Q24	F-2	Q94	D-6	Q165	M-5	TP33	H-10
D10	C-15	Q25	G-3	Q95	D-7	Q166	M-8		
D11	C-16	Q26	G-4	Q96	N-10	Q167	M-11		
		Q27	F-3	Q97	M-10	Q168	E-2		
E1	N-16	Q28	G-4	Q98	M-10	Q169	E-6		
E2	D-11	Q29	F-3	Q99	M-11	Q170	E-10		
		Q30	F-4	Q100	L-11				
IC1	C-3	Q31	G-3	Q101	L-11	RB1	J-16		
IC2	M-3	Q32	G-4	Q102	L-10				
IC3	K-3	Q33	F-4	Q103	L-10	RV1	C-2		
IC4	J-2	Q34	E-1	Q104	J-11	RV2	N-2		
IC5	I-2	Q35	E-2	Q105	J-12	RV3	N-4		
IC6	I-4	Q36	N-4	Q106	K-11	RV5	N-5		
IC7	G-1	Q37	D-2	Q107	J-9	RV7	G-2		
IC8	F-1	Q38	D-2	Q108	K-10	RV8	N-5		
IC9	E-3	Q39	E-3	Q109	H-12	RV9	N-5		
IC10	L-7	Q40	E-2	Q110	H-11	RV10	N-6		
IC11	K-7	Q41	E-4	Q111	H-9	RV11	M-7		
IC12	J-6	Q42	E-2	Q112	H-12	RV13	N-7		
IC13	I-6	Q43	E-2	Q113	G-11	RV15	G-6		
IC14	I-8	Q44	E-1	Q114	G-10	RV16	N-7		
IC15	G-5	Q45	E-2	Q115	G-10	RV17	N-8		
IC16	F-5	Q46	E-3	Q116	F-10	RV18	N-9		
IC17	E-7	Q47	D-3	Q117	G-11	RV19	N-10		
IC18	L-11	Q48	D-2	Q118	G-11	RV21	N-11		
IC19	K-10	Q49	D-3	Q119	F-11	RV23	G-10		
IC20	J-10	Q50	N-6	Q120	G-11	RV24	N-11		
IC21	I-10	Q51	M-7	Q121	F-11	RV25	N-12		
IC22	I-12	Q52	M-6	Q122	F-11	RV26	G-13		
IC23	G-9	Q53	M-7	Q123	F-10	RV27	N-3		
IC24	F-9	Q54	L-8	Q124	F-12	RV28	J-15		
IC25	E-10	Q55	L-7	Q125	F-12	RV29	N-10		
IC26	K-13	Q56	L-6	Q126	E-9	RV30	H-14		
IC27	I-13	Q57	L-6	Q127	E-9	RV31	I-15		
IC28	H-14	Q58	J-7	Q128	N-12				
IC29	E-16	Q59	J-8	Q129	D-10	S1	N-13		
IC30	E-13	Q60	K-8	Q130	E-11				
IC31	G-15	Q61	J-5	Q131	D-9	TH1	I-1		
IC32	L-16	Q62	K-6	Q132	E-10	TH2	I-5		
IC33	M-13	Q63	H-8	Q133	E-12	TH3	I-9		
IC34	M-15	Q64	H-7	Q134	E-10				
IC35	L-13	Q65	H-6	Q135	E-10	TP1	C-6		
IC36	D-16	Q66	H-8	Q136	E-9	TP2	D-4		
IC37	C-16	Q67	G-7	Q137	E-10	TP3	C-5		
IC39	B-15	Q68	H-6	Q138	E-11	TP5	L-2		
IC40	J-14	Q69	G-6	Q139	D-11	TP6	J-3		
		Q70	F-6	Q140	D-10	TP7	J-1		
Q1	B-2	Q71	G-7	Q141	D-11	TP8	J-2		
Q2	C-1	Q72	G-8	Q142	D-14	TP9	J-4		
Q3	C-4	Q73	G-7	Q144	G-14	TP10	F-1		
Q4	N-3	Q74	G-8	Q145	H-13	TP11	N-13		
Q5	M-3	Q75	F-7	Q146	I-13	TP13	K-6		
Q6	M-2	Q76	F-8	Q147	I-13	TP14	J-7		
Q7	M-4	Q77	G-7	Q148	K-3	TP15	J-5		
Q8	L-4	Q78	G-8	Q149	J-1	TP16	J-5		
Q9	L-3	Q79	F-8	Q150	K-1	TP17	J-8		
Q10	L-3	Q80	E-5	Q151	K-1	TP18	E-5		
Q11	K-2	Q81	E-6	Q152	K-1	TP19	N-14		

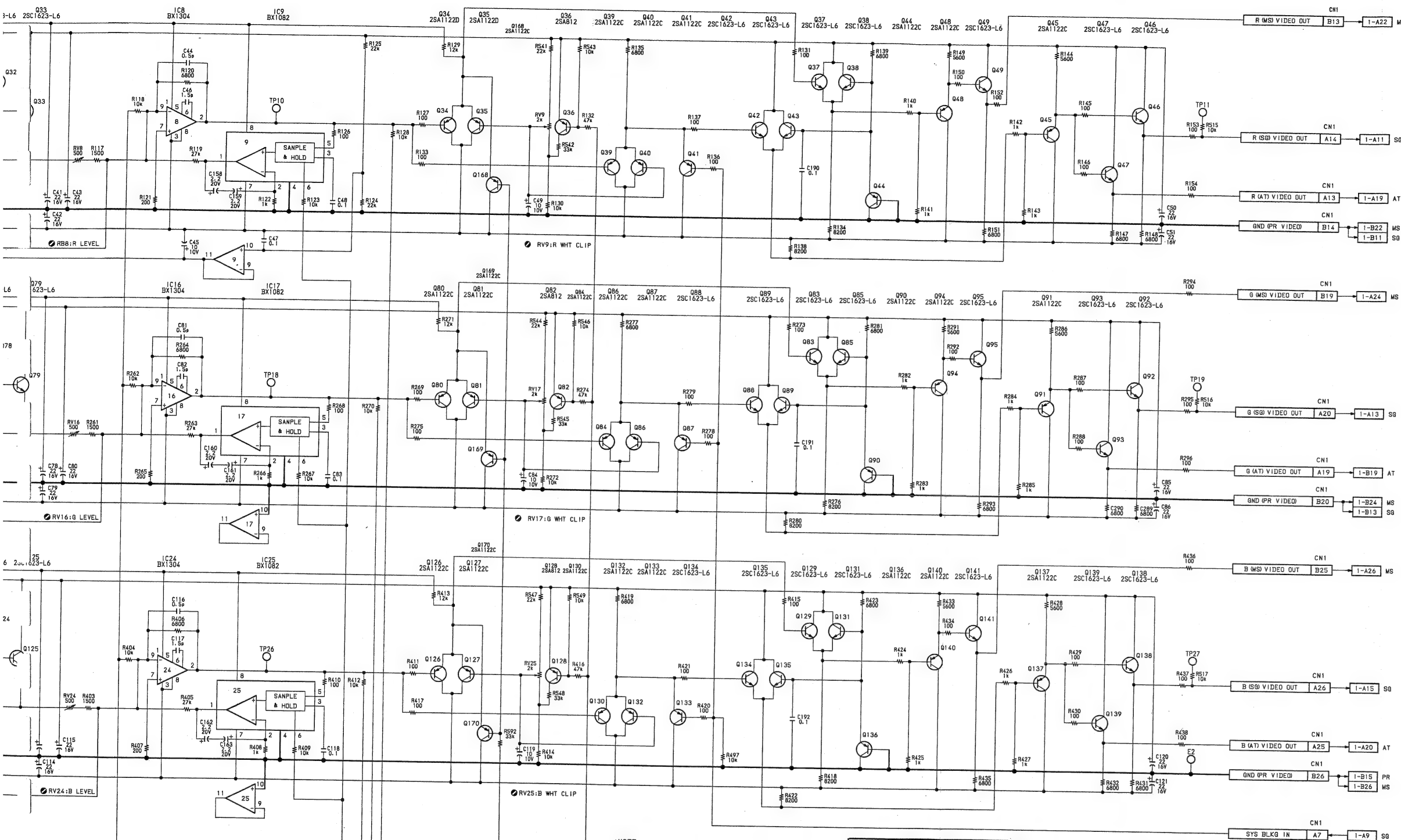


NOTE			
NO.	REF. NO	CHANGE INFORMATION	SER. NO
#1	L4, L5, L6, L7, L8	4.7UH → 1UH	30301- BVP-370-J
	L9, L10, L11, L12		42701- BVP-370P-AE
*NOTE			
REF. NO	CHANGE INFORMATION	SER. NO	
C193, 194	ADD	10801-	BVP-370-UC
		30501-	BVP-370-J
C195	4PF → 3PF	40901-	BVP-370P-AE
		10701-	BVP-270-UC
C195	5PF → 4PF	30101-	BVP-270-J
		40101-	BVP-270P-AE
C193, 194	4PF → 3PF	10901-	BVP-370-UC
		30701-	BVP-370-J
C195	5PF → 4PF	41001-	BVP-370P-AE
		10801-	BVP-270-UC
C195	5PF → 4PF	30201-	BVP-270-J
		40201-	BVP-270P-AE

PR-130 BOARD (1/3)

BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)
BVP-270 (J)
BVP-270 (UC)
BVP-270P (AE)





*NOTE

REF No.	CHANGE INFORMATION	SER No.
C186		
C187		
C188		
R589		
R590		
R591		
Q168		
Q169		
Q170		
	ADD	
		10301-BVP-370:UC
		20301-BVP-370P:AE
		10201-BVP-270:UC
		20101-BVP-270P:AE

REF No.	CHANGE INFORMATION	SER No.
C35, 36		
72, 73		
107, 108		
	22 → 10	
		10501-BVP-370:UC
		30401-BVP-370P:AE
		40601-BVP-370P:AE
		10401-BVP-270:UC
		30101-BVP-270P:AE
		40101-BVP-270P:AE

PR-130 BOARD (2/3)

BVP-370 (J)
 BVP-370 (UC)
 BVP-370P (AE)
 BVP-270 (J)
 BVP-270 (UC)
 BVP-270P (AE)

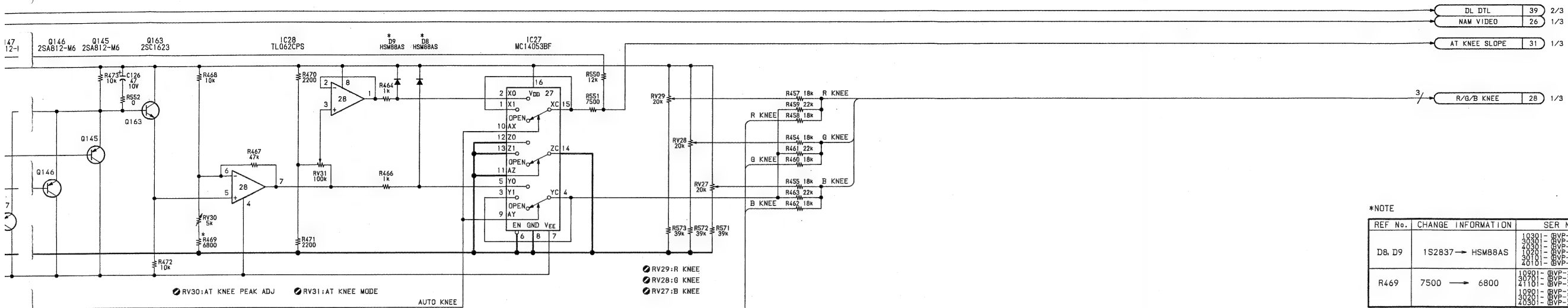
C-57

C-58

B-BVP370-PR130M#2

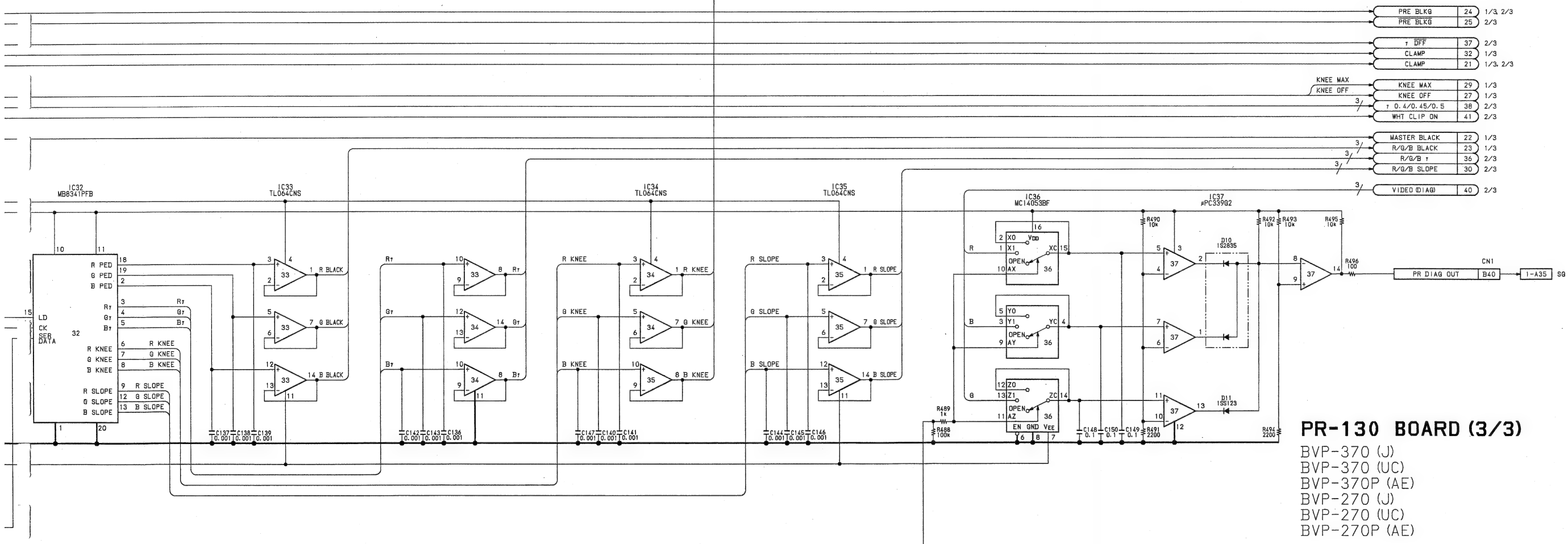
A





*NOTE

REF No.	CHANGE INFORMATION	SER No.
DB, D9	1S2837 → HSM88AS	10301 - BVP-370;U
		20301 - BVP-370;U
		20301 - BVP-370;AE
		10201 - BVP-270;U
		20101 - BVP-270;AE
R469	7500 → 6800	10901 - BVP-370;U
		20301 - BVP-370;U
		21101 - BVP-370;AE
		10901 - BVP-270;U
		20301 - BVP-270;U



PR-130 BOARD (3/3)

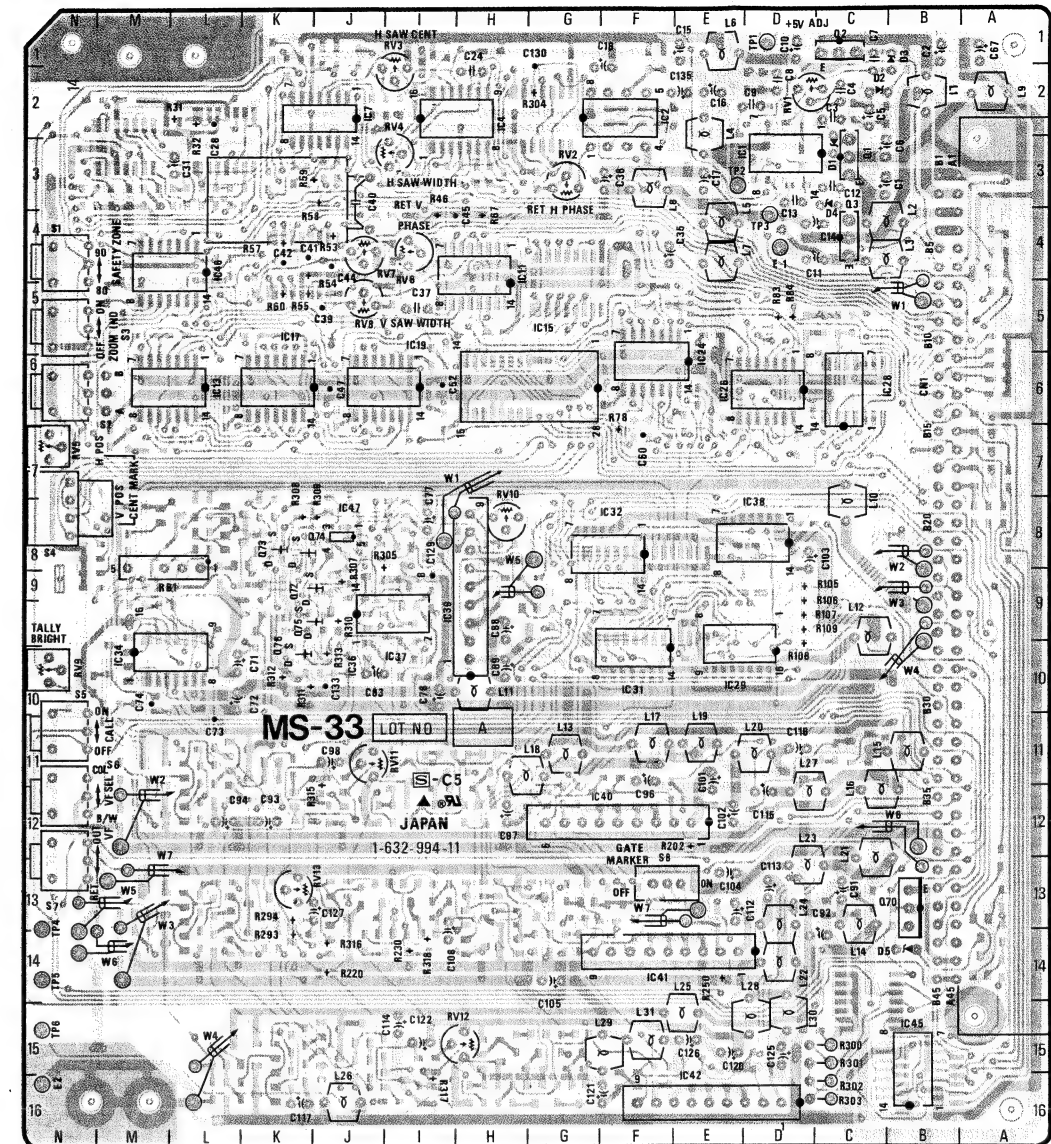
BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)
BVP-270 (J)
BVP-270 (UC)
BVP-270P (AE)

MS-33 BOARD

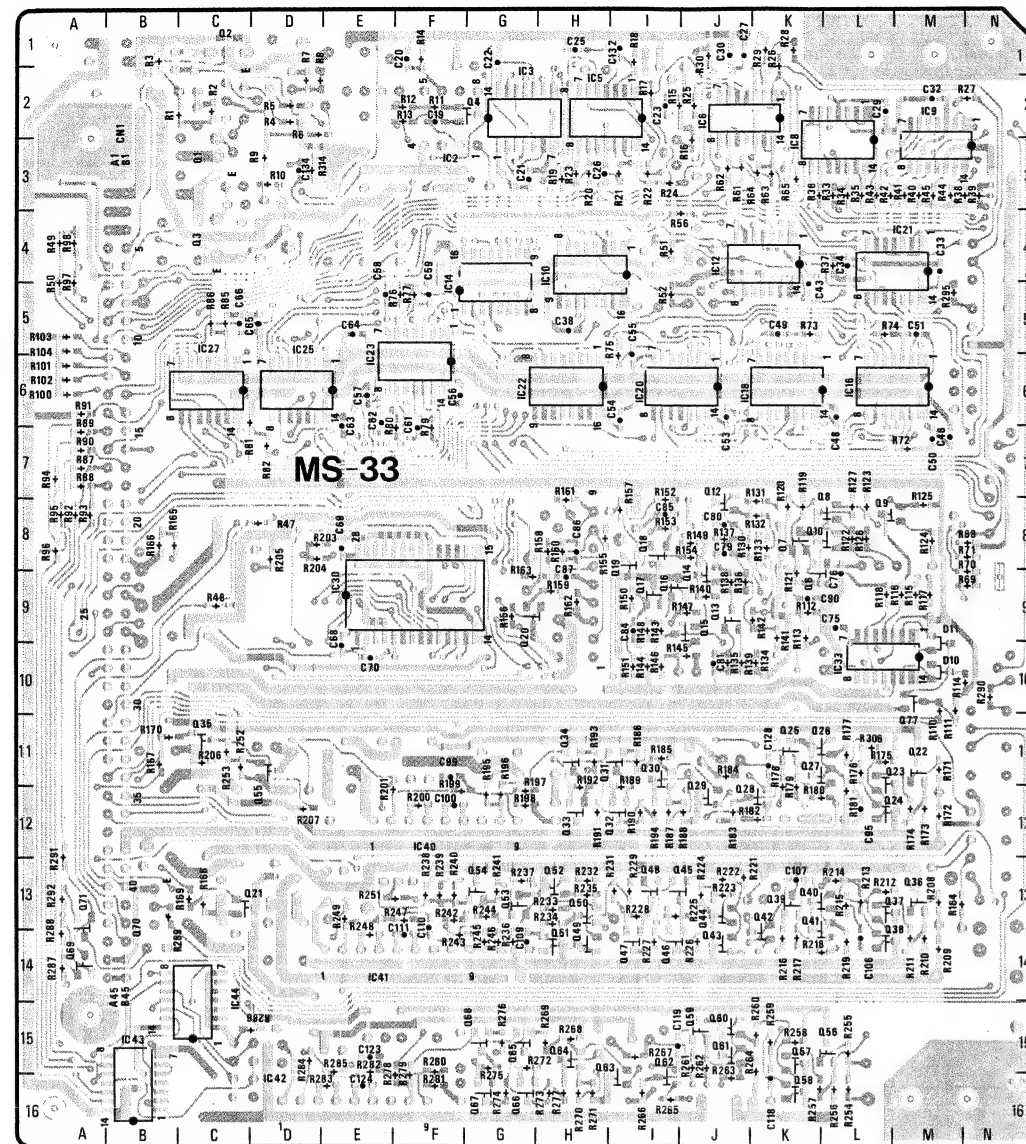
Serial No. 10001 - 10210 (UC)

30001 - 30205 (J)

40001 - 40210 (AE)



1-632-994-11 COMPONENT SIDE



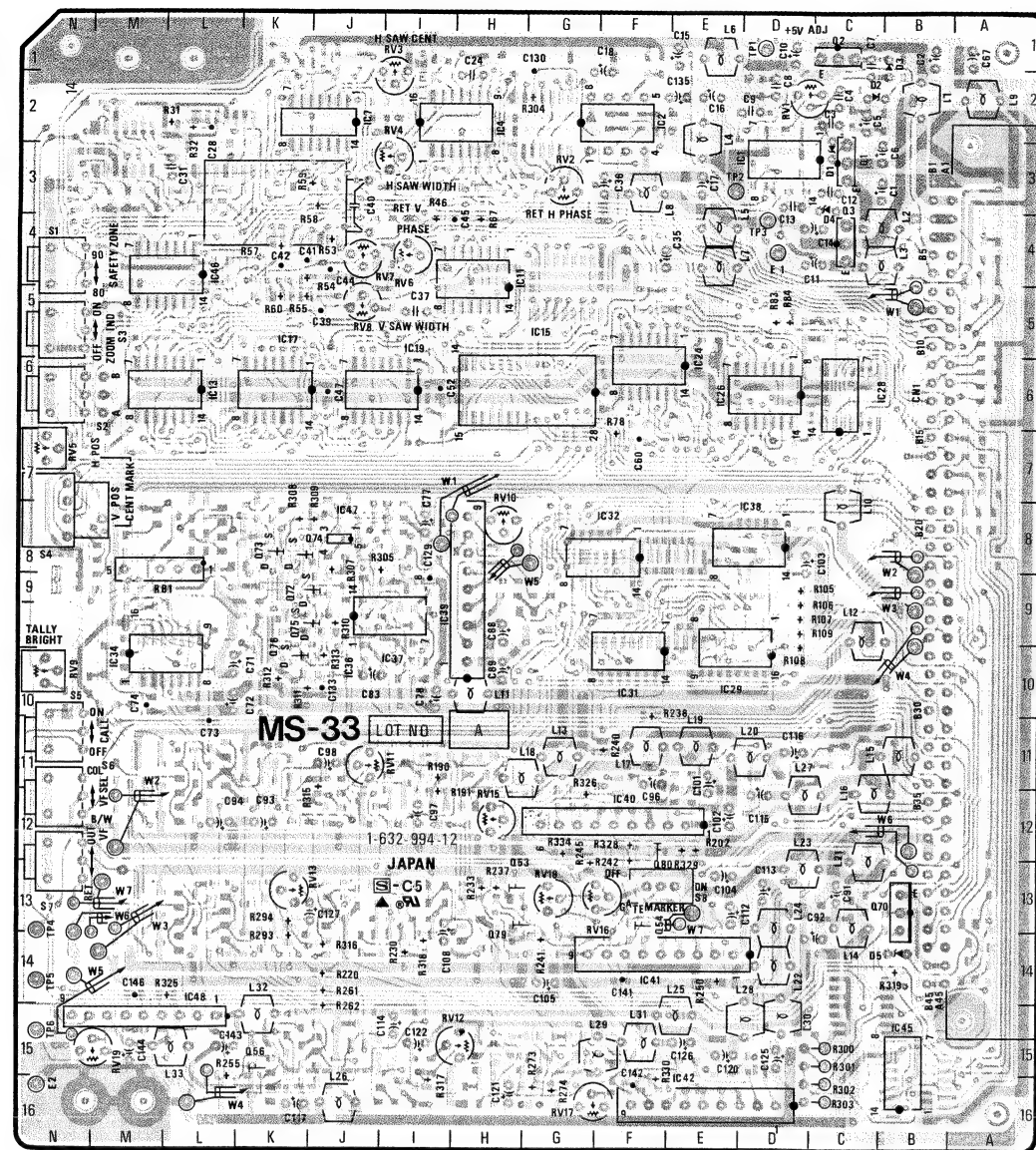
1-632-994-11 SOLDERING SIDE

MS-33 1-632-994-11

CN1	B-6	Q14	J-9	RV4	I-2
D1	C-3	Q15	J-9	RV5	N-7
D2	C-2	Q16	I-9	RV6	I-4
D3	B-1	Q17	I-9	RV7	J-4
D4	C-4	Q18	I-8	RV8	J-5
D5	B-14	Q19	I-8	RV9	N-10
D10	M-10	Q20	G-9	RV10	H-7
D11	M-9	Q21	C-13		
E1	D-4	Q22	M-11	S1	N-4
E2	N-16	Q23	L-11	S2	N-6
IC1	D-3	Q24	L-12	S3	M-5
IC2	F-2	Q25	K-11	S4	N-8
IC3	G-2	Q26	K-11	S5	N-10
IC4	H-2	Q27	K-11	S6	M-11
IC5	H-2	Q28	J-12	S7	N-13
IC6	J-2	Q29	J-12	S8	F-13
IC7	J-2	Q30	I-11	TP1	D-1
IC8	K-3	Q31	H-11	TP2	E-3
IC9	M-2	Q32	I-12	TP3	D-4
IC10	H-4	Q33	H-12	TP4	N-13
IC11	H-4	Q34	H-11	TP5	N-14
IC12	J-4	Q35	C-11	TP6	N-15
IC13	L-6	Q36	M-13		
IC14	F-5	Q37	L-13		
IC15	G-5	Q38	L-14		
IC16	L-6	Q39	K-13		
IC17	K-5	Q40	K-13		
IC18	J-6	Q41	K-13		
IC19	I-5	Q42	K-13		
IC20	I-6	Q43	J-14		
IC21	M-4	Q44	J-13		
IC22	G-6	Q45	I-13		
IC23	E-6	Q46	I-14		
IC24	E-6	Q47	I-14		
IC25	D-5	Q48	I-13		
IC26	E-6	Q49	H-14		
IC27	C-5	Q50	H-13		
IC28	C-6	Q51	H-14		
IC29	E-10	Q52	H-13		
IC30	E-9	Q53	G-13		
IC31	F-10	Q54	G-13		
IC32	F-8	Q55	D-12		
IC33	L-10	Q56	L-15		
IC34	M-10	Q57	K-15		
IC37	I-10	Q58	K-16		
IC38	D-8	Q59	J-15		
IC39	I-9	Q60	J-15		
IC40	F-12	Q61	J-15		
IC41	F-14	Q62	I-15		
IC42	E-16	Q63	I-16		
IC43	B-15	Q64	H-15		
IC44	C-14	Q65	G-15		
IC45	B-15	Q66	G-16		
IC46	L-4	Q67	G-16		
IC47	J-8	Q68	G-15		
Q1	C-3	Q69	A-14		
Q2	C-1	Q70	B-13		
Q3	C-3	Q71	A-13		
Q4	G-2	Q72	K-9		
Q6	K-9	Q73	K-8		
Q7	K-8	Q74	J-8		
Q8	L-8	Q75	K-9		
Q9	L-8	Q76	K-10		
Q10	L-8	Q77	M-11		
Q12	J-7	RB1	M-9		
Q13	J-9	RV1	D-2		
		RV2	G-3		
		RV3	I-1		

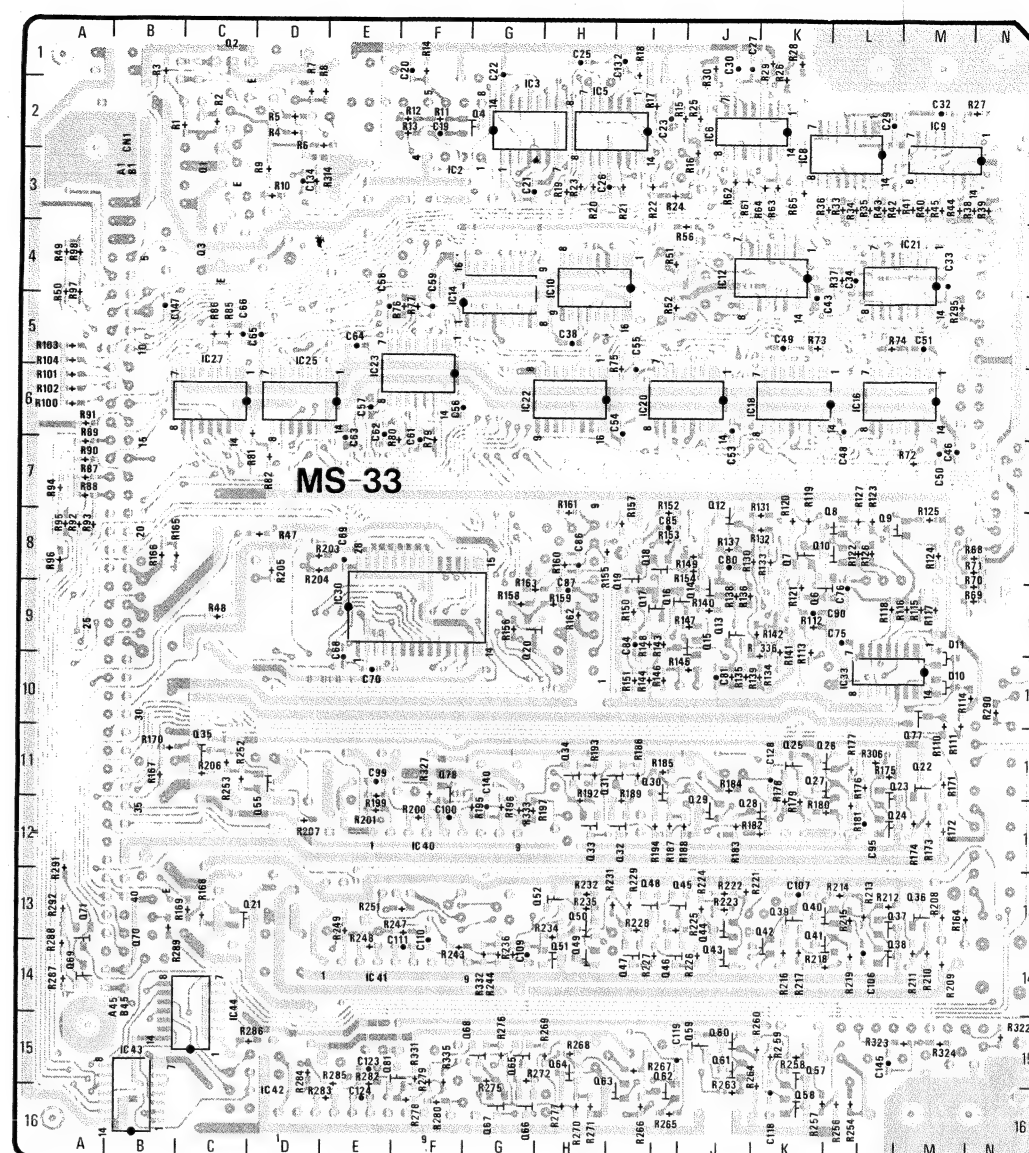
MS-33 BOARD

Serial No. 10301 - 10410 (UC)
30301 - 30305 (J)
40301 - 40420 (AE)



1-632-994-12 COMPONENT SIDE

C-68 (b)



1-632-994-12 SOLDERING SIDE

C-69 (b)

MS-33 1-

CN1

D1

D2

D3

D4

D5

D10

D11

E1

E2

IC1

IC2

IC3

IC4

IC5

IC6

IC7

IC8

IC9

IC10

IC11

IC12

IC13

IC14

IC15

IC16

IC17

IC18

IC19

IC20

IC21

IC22

IC23

IC24

IC25

IC26

IC27

IC28

IC29

IC30

IC31

IC32

IC33

IC34

IC37

IC38

IC39

IC40

IC41

IC42

IC43

IC44

IC45

IC46

IC47

IC48

Q1

Q2

Q3

Q4

Q6

Q7

Q8

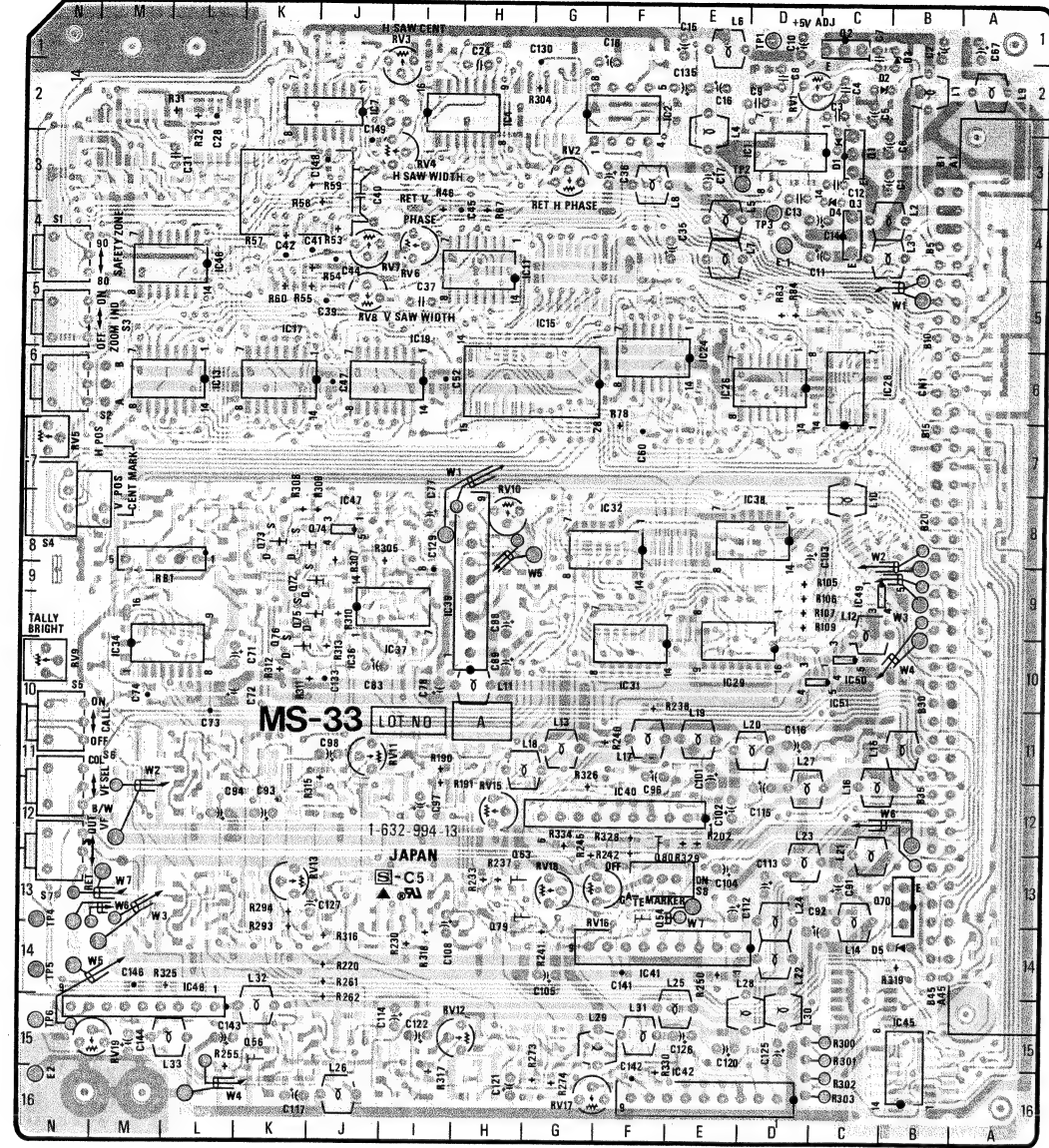
Q9

Q10

Q12

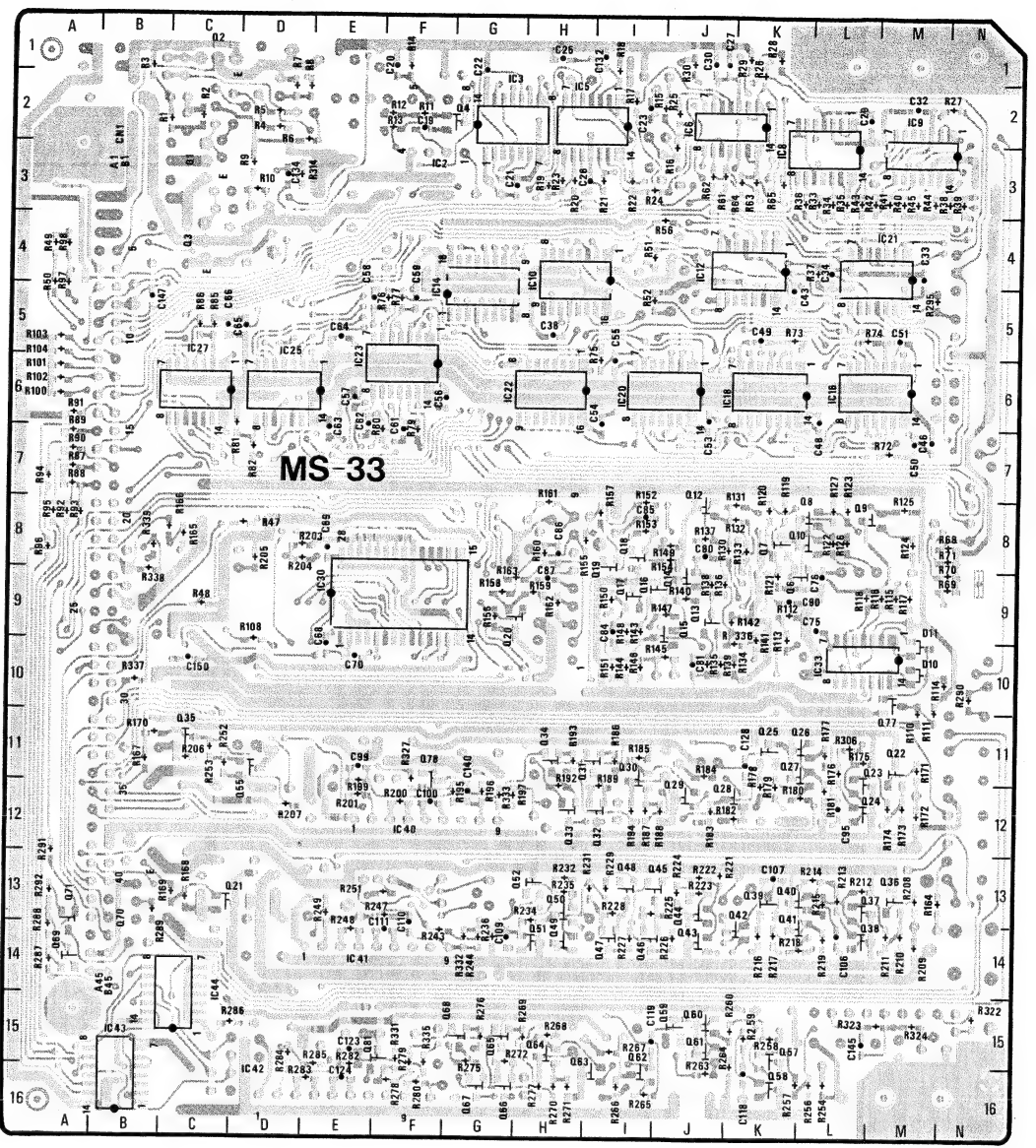
MS-33 BOARD

Serial No. 10501 - 10800 (UC)
30401 - 30600 (J)
40601 - 40900 (AE)



1-632-994-13 COMPONENT SIDE

C-68 (c)



1-632-994-13 SOLDERING SIDE

C-69 (c)

MS-33 1

CN1

D1
D2
D3
D4
D5
D10
D11

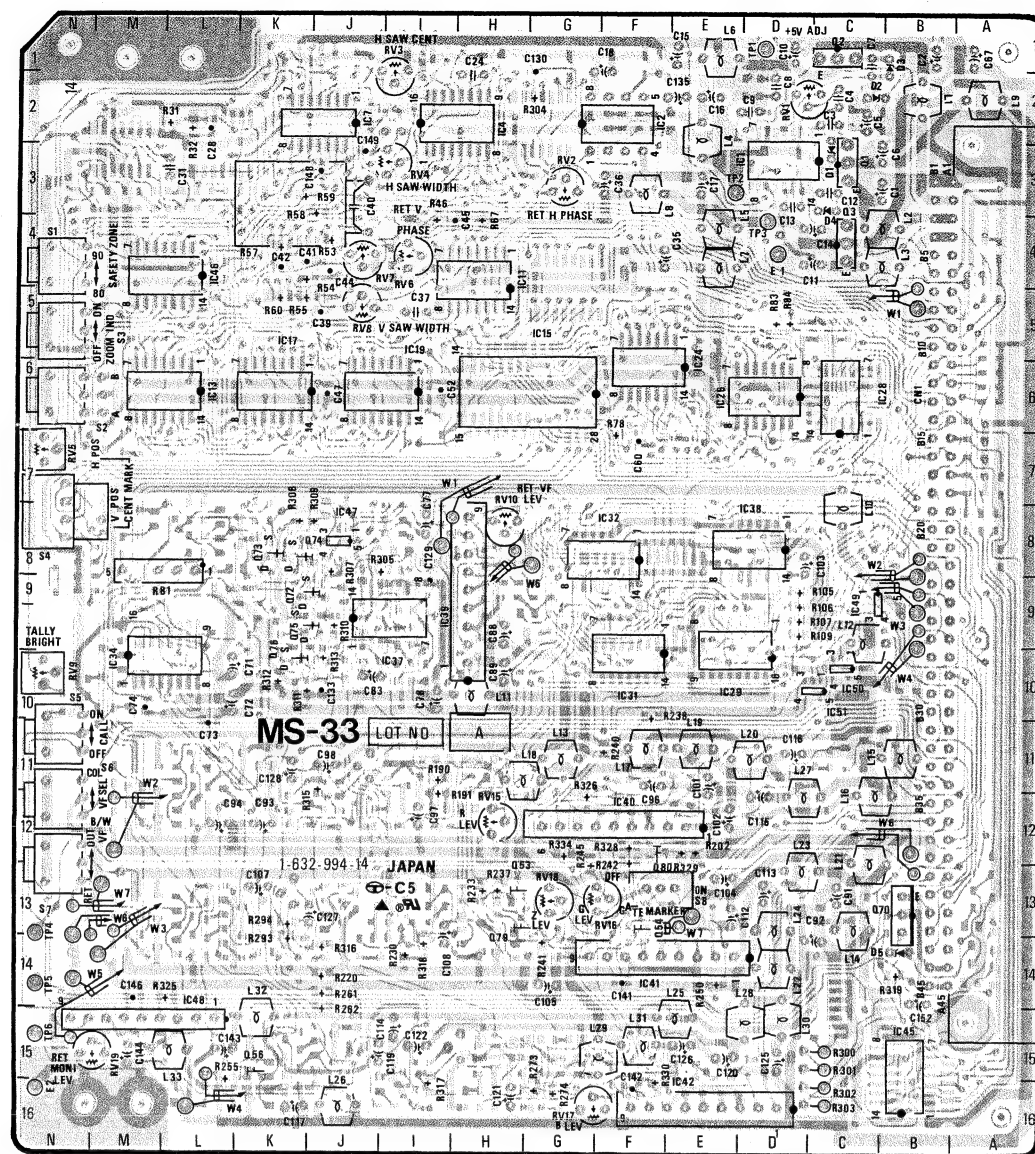
E1
E2

IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC14
IC15
IC16
IC17
IC18
IC19
IC20
IC21
IC22
IC23
IC24
IC25
IC26
IC27
IC28
IC29
IC30
IC31
IC32
IC33
IC34
IC37
IC38
IC39
IC40
IC41
IC42
IC43
IC44
IC45
IC46
IC47
IC48
IC49
IC50
IC51

Q1
Q2
Q3
Q4
Q6
Q7
Q8

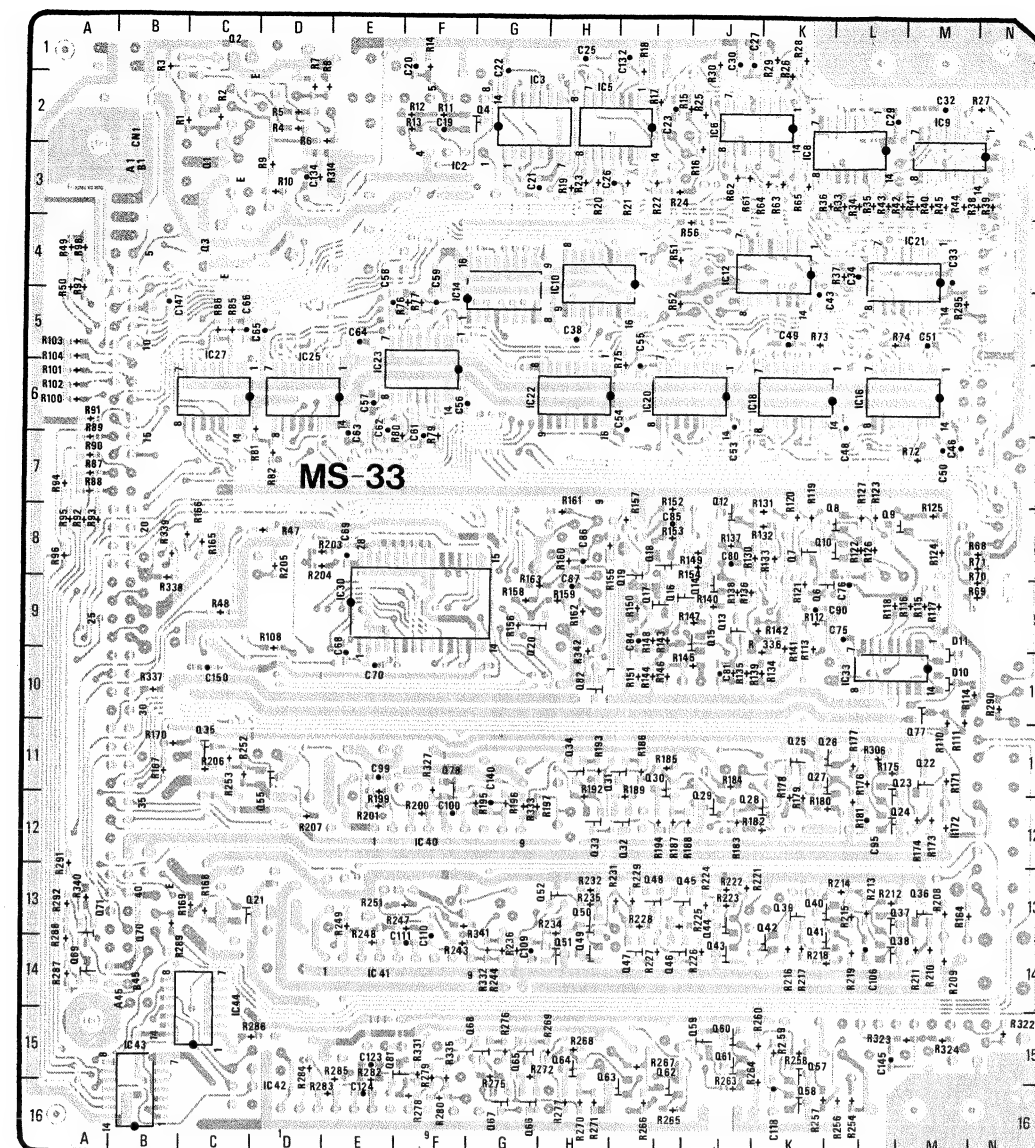
MS-33/33P BOARD

Serial No. 10801 - (UC)
30601 - (J)
40901 - (AE)



1-632-994-14 COMPONENT SIDE

C-68 (d)



1-632-994-14 SOLDERING SIDE

C-69 (d)

MS-33/

CN1

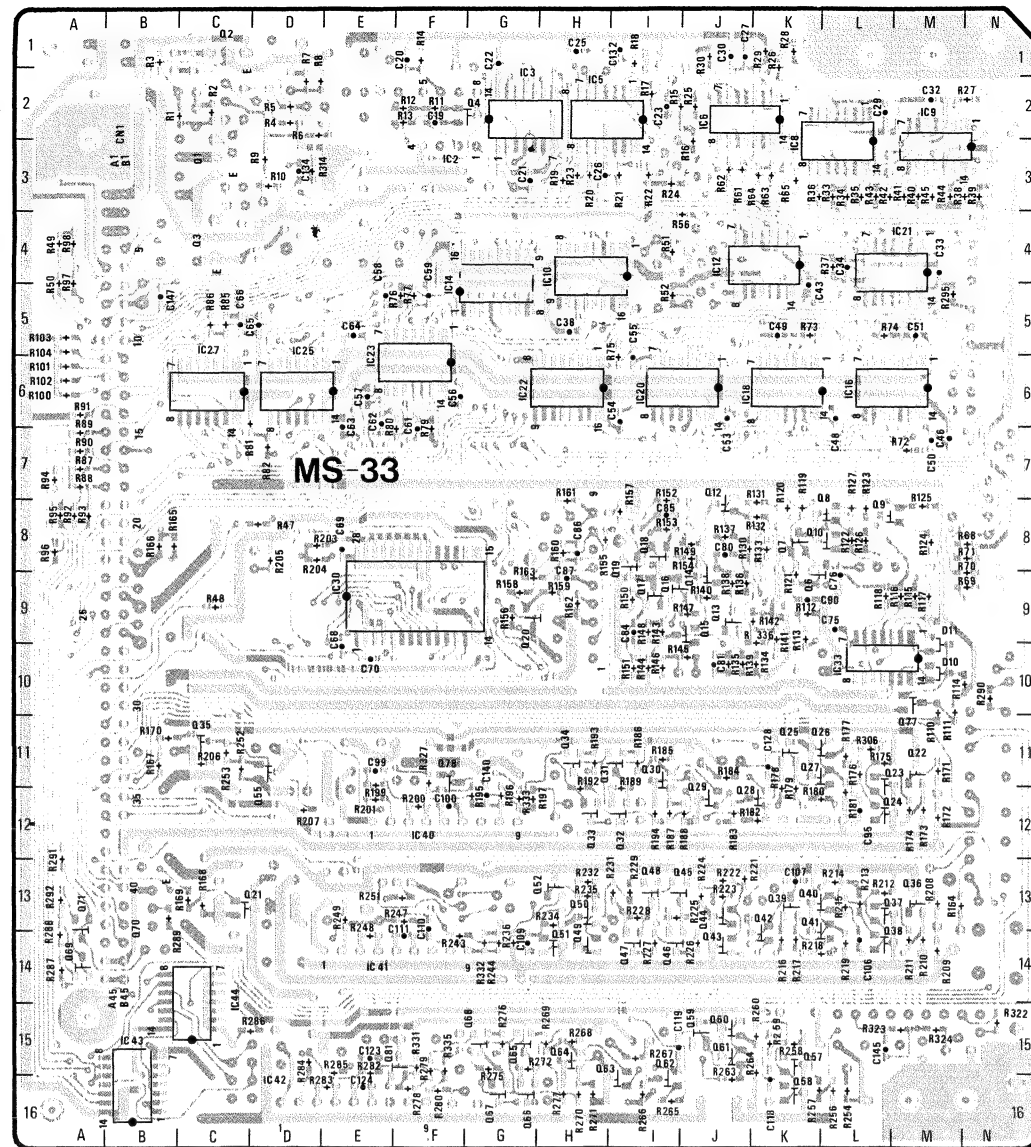
D1
D2
D3
D4
D5
D10
D11
D12

E1
E2

IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC14
IC15
IC16
IC17
IC18
IC19
IC20
IC21
IC22
IC23
IC24
IC25
IC26
IC27
IC28
IC29
IC30
IC31
IC32
IC33
IC34
IC37
IC38
IC39
IC40
IC41
IC42
IC43
IC44
IC45
IC46
IC47
IC48
IC49
IC50
IC51

Q1
Q2
Q3
Q4
Q6
Q7

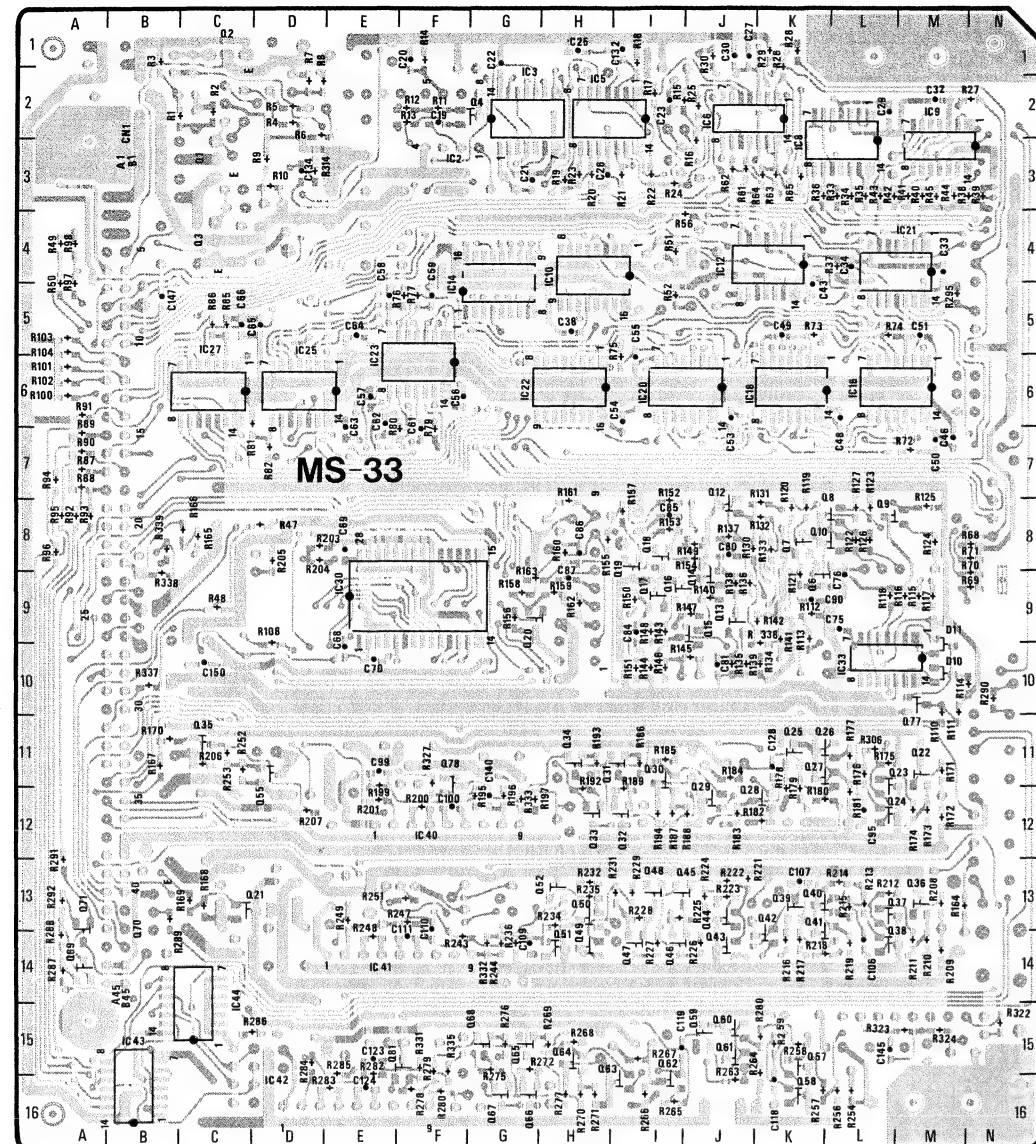
MS-33 1-632-994-12



1-632-994-12 SOLDERING SIDE

CN1	B-6	Q13	J-9	RB1	M-9
D1	C-3	Q14	J-9	RV1	D-2
D2	C-2	Q15	J-9	RV2	G-3
D3	B-1	Q16	I-9	RV3	I-1
D4	C-4	Q17	I-9	RV4	I-2
D5	B-14	Q18	I-8	RV5	N-7
D10	M-10	Q19	I-8	RV6	I-4
D11	M-9	Q20	G-9	RV7	J-4
E1	D-4	Q21	C-13	RV8	J-5
E2	N-16	Q22	M-11	RV9	N-10
IC1	D-3	Q23	L-11	RV10	H-7
IC2	F-2	Q24	L-12	RV15	H-12
IC3	G-2	Q25	K-11	RV16	F-13
IC4	H-2	Q26	K-11	RV17	G-16
IC5	H-2	Q27	K-11	RV18	G-13
IC6	J-2	Q28	J-12	RV19	M-15
IC7	J-2	Q29	J-12		
IC8	K-3	Q30	I-11	S1	N-4
IC9	M-2	Q31	H-11	S2	N-6
IC10	H-4	Q32	I-12	S3	M-5
IC11	H-4	Q33	H-12	S4	N-8
IC12	J-4	Q34	H-11	S5	N-10
IC13	L-6	Q35	C-11	S6	M-11
IC14	F-5	Q36	M-13	S7	N-13
IC15	G-5	Q37	L-13	S8	E-13
IC16	L-6	Q38	L-14		
IC17	K-5	Q39	K-13	TP1	D-1
IC18	J-6	Q40	K-13	TP2	E-3
IC19	I-5	Q41	K-13	TP3	D-4
IC20	I-6	Q42	K-13	TP4	N-13
IC21	M-4	Q43	J-14	TP5	N-14
IC22	G-6	Q44	J-13	TP6	N-15
IC23	E-6	Q45	I-13		
IC24	E-6	Q46	I-14		
IC25	D-5	Q47	I-14		
IC26	E-6	Q48	I-13		
IC27	C-5	Q49	H-14		
IC28	C-6	Q50	H-13		
IC29	E-10	Q51	H-14		
IC30	E-9	Q52	H-13		
IC31	F-10	Q53	H-13		
IC32	F-8	Q54	F-13		
IC33	L-10	Q55	D-12		
IC34	M-10	Q56	K-15		
IC37	I-10	Q57	K-15		
IC38	D-8	Q58	K-16		
IC39	I-9	Q59	J-15		
IC40	F-12	Q60	J-15		
IC41	F-14	Q61	J-15		
IC42	E-16	Q62	I-15		
IC43	B-15	Q63	I-16		
IC44	C-14	Q64	H-15		
IC45	B-15	Q65	G-15		
IC46	L-4	Q66	G-16		
IC47	J-8	Q67	G-16		
IC48	L-14	Q68	G-15		
Q1	C-3	Q69	A-14		
Q2	C-1	Q70	B-13		
Q3	C-3	Q71	A-13		
Q4	G-2	Q72	K-9		
Q6	K-9	Q73	K-8		
Q7	K-8	Q74	J-8		
Q8	L-8	Q75	K-9		
Q9	L-8	Q76	K-10		
Q10	L-8	Q77	M-11		
Q12	J-7	Q78	F-11		
		Q79	H-14		
		Q80	F-13		
		Q81	E-15		

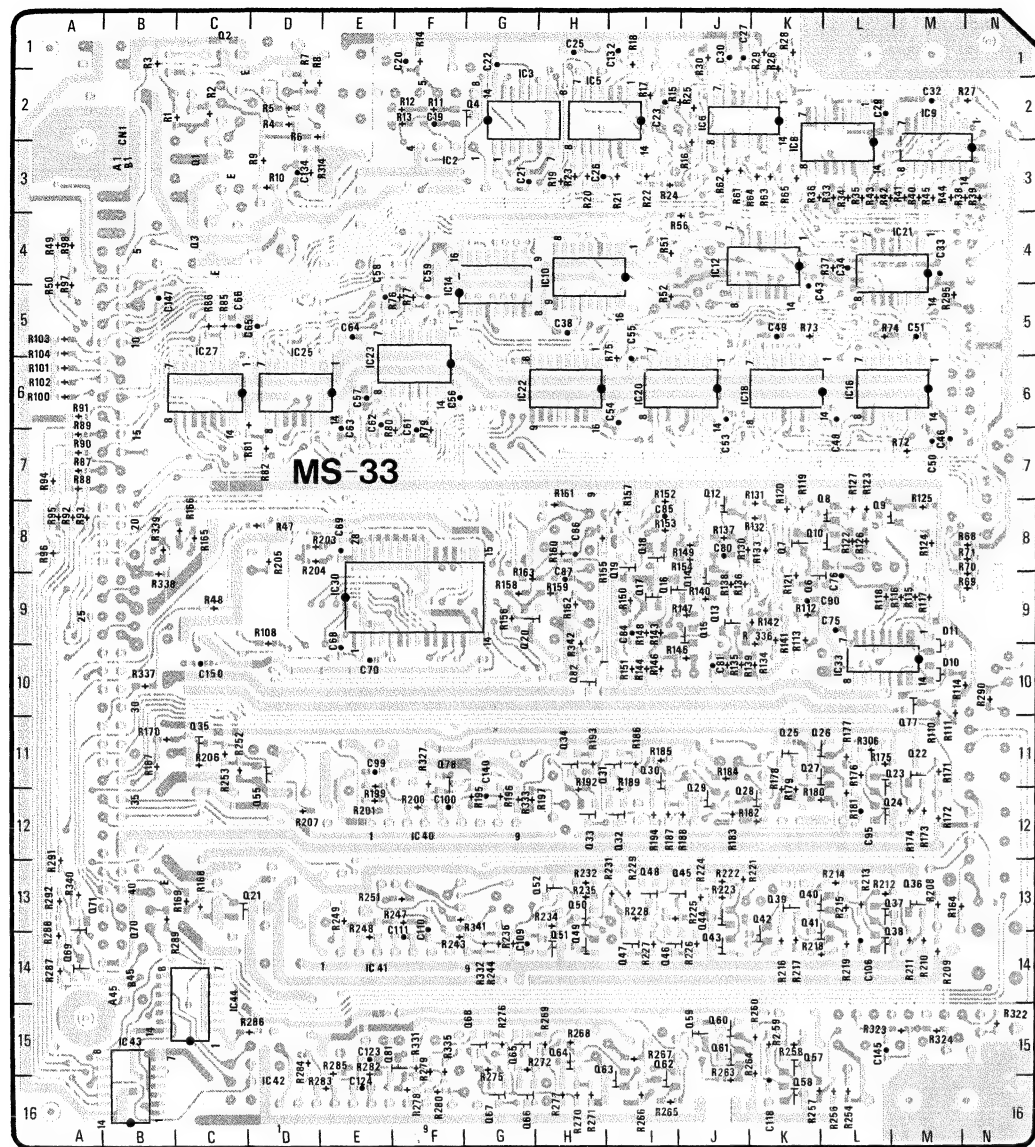
MS-33 1-632-994-13



1-632-994-13 SOLDERING SIDE

CN1	B-6	Q9	L-8	Q80	F-12
D1	C-3	Q10	L-8	Q81	E-15
D2	C-2	Q12	J-7		
D3	B-1	Q13	J-9	RB1	L-9
D4	C-4	Q14	J-9	RV1	D-2
D5	B-14	Q15	J-9	RV2	G-3
D10	M-10	Q16	I-9	RV3	I-1
D11	M-9	Q17	I-9	RV4	I-2
		Q18	I-8	RV5	N-7
E1	D-4	Q19	I-8	RV6	I-4
E2	N-16	Q20	G-9	RV7	J-4
		Q21	C-13	RV8	J-5
IC1	D-3	Q22	M-11	RV9	N-10
IC2	F-2	Q23	L-11	RV10	H-7
IC3	G-2	Q24	L-12	RV15	H-12
IC4	H-2	Q25	K-11	RV16	F-13
IC5	H-2	Q26	L-11	RV17	G-16
IC6	J-2	Q27	K-11	RV18	G-13
IC7	J-2	Q28	K-12	RV19	M-15
IC8	K-3	Q29	J-12		
IC9	M-2	Q30	I-11	S1	N-4
IC10	H-4	Q31	I-11	S2	N-6
IC11	H-4	Q32	I-12	S3	M-5
IC12	J-4	Q33	H-12	S4	N-8
IC13	L-6	Q34	H-11	S5	N-10
IC14	F-4	Q35	C-11	S6	M-11
IC15	G-5	Q36	M-13	S7	N-13
IC16	L-6	Q37	L-13	S8	E-13
IC17	K-5	Q38	L-14		
IC18	J-6	Q39	K-13	TP1	D-1
IC19	I-5	Q40	K-13	TP2	E-3
IC20	I-6	Q41	K-13	TP3	D-4
IC21	M-4	Q42	K-13	TP4	N-13
IC22	G-6	Q43	J-14	TP5	N-14
IC23	E-6	Q44	J-13	TP6	N-15
IC24	E-6	Q45	J-13		
IC25	D-5	Q46	I-14		
IC26	E-6	Q47	I-14		
IC27	C-5	Q48	I-13		
IC28	C-6	Q49	H-14		
IC29	D-10	Q50	H-13		
IC30	E-9	Q51	H-14		
IC31	F-10	Q52	H-13		
IC32	F-8	Q53	H-13		
IC33	L-10	Q54	F-13		
IC34	M-10	Q55	D-12		
IC37	I-10	Q56	K-15		
IC38	D-8	Q57	K-15		
IC39	I-9	Q58	K-16		
IC40	F-12	Q59	J-15		
IC41	F-14	Q60	J-15		
IC42	E-16	Q61	J-15		
IC43	B-15	Q62	I-15		
IC44	C-15	Q63	I-16		
IC45	B-15	Q64	H-15		
IC46	L-4	Q65	G-15		
IC47	J-8	Q66	G-16		
IC48	L-14	Q67	G-16		
IC49	C-9	Q68	G-15		
IC50	C-10	Q69	A-14		
IC51	C-10	Q70	B-13		
		Q71	A-13		
Q1	C-3	Q72	K-9		
Q2	C-1	Q73	K-8		
Q3	C-3	Q74	J-8		
Q4	G-2	Q75	K-9		
Q6	K-9	Q76	K-10		
Q7	K-8	Q77	M-11		
Q8	L-8	Q78	F-11		
		Q79	H-13		

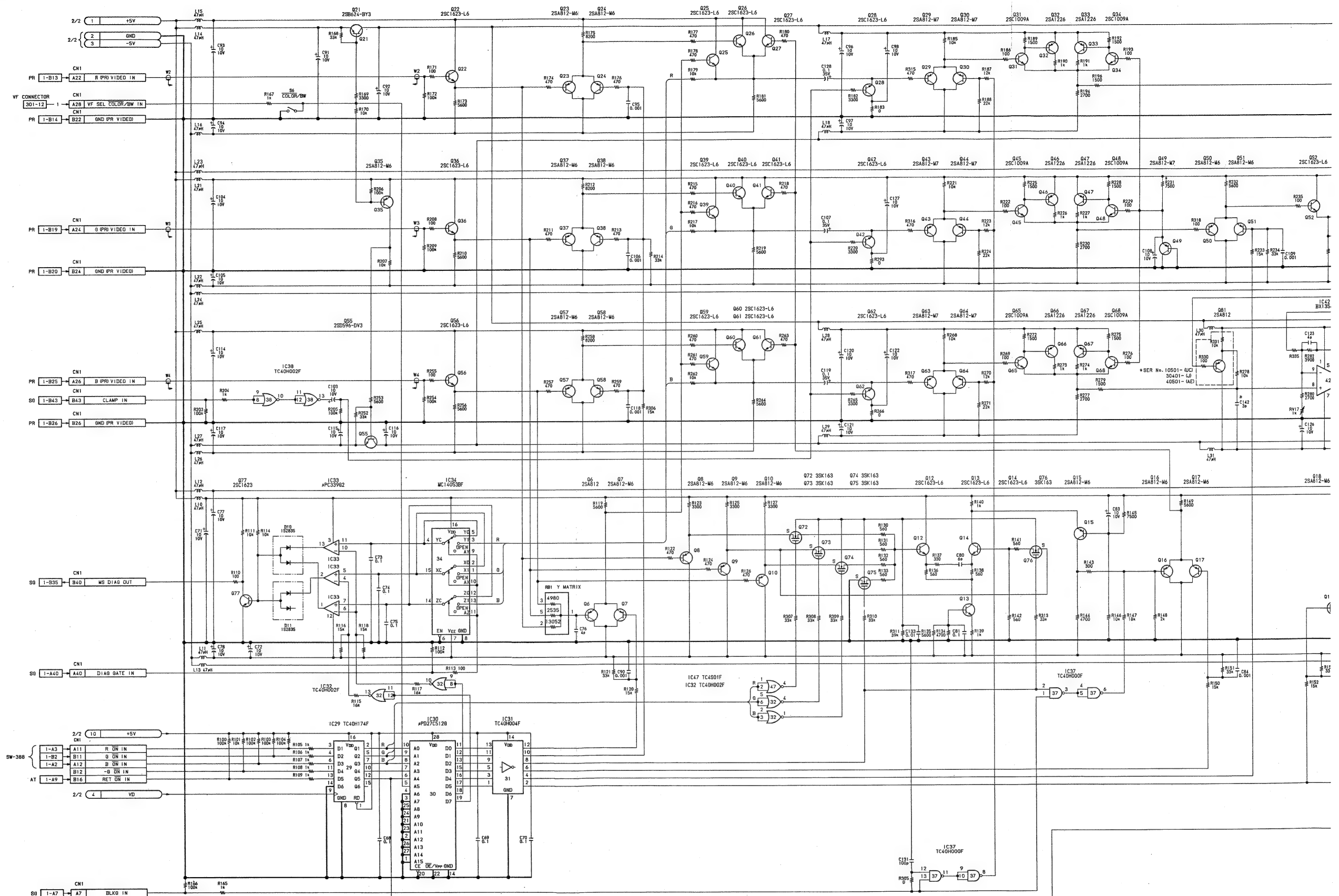
MS-33/33P 1-632-994-14



1-632-994-14 SOLDERING SIDE

CN1	B-6	Q8	L-8	Q79	H-13
D1	C-3	Q9	L-8	Q80	F-12
D2	C-2	Q10	L-8	Q81	E-15
D3	B-1	Q12	J-9	Q82	H-10
D4	C-4	Q13	J-9		
D5	B-14	Q14	J-9	RB1	L-9
D10	M-10	Q15	J-9		
D11	M-9	Q16	I-9	RV1	D-2
D12	I-2	Q17	I-9	RV2	G-3
E1	D-4	Q18	I-8	RV3	I-1
E2	N-16	Q19	I-8	RV4	I-2
		Q20	G-9	RV5	N-7
		Q21	C-13	RV6	I-4
IC1	D-3	Q22	M-11	RV7	J-4
IC2	F-2	Q23	L-11	RV8	J-5
IC3	G-2	Q24	L-12	RV9	N-10
IC4	H-2	Q25	K-11	RV10	H-7
IC5	H-2	Q26	L-11	RV15	H-12
IC6	J-2	Q27	K-11	RV16	F-13
IC7	J-2	Q28	K-12	RV17	G-16
IC8	K-3	Q29	J-12	RV18	G-13
IC9	M-2	Q30	I-11	RV19	M-15
IC10	H-4	Q31	I-11		
IC11	H-4	Q32	I-12	S1	N-4
IC12	J-4	Q33	H-12	S2	M-6
IC13	L-6	Q34	H-11	S3	M-5
IC14	F-4	Q35	C-11	S4	N-8
IC15	G-5	Q36	M-13	S5	N-10
IC16	L-6	Q37	L-13	S6	M-11
IC17	K-5	Q38	L-14	S7	N-13
IC18	J-6	Q39	K-13	S8	E-13
IC19	I-5	Q40	K-13	TP1	D-1
IC20	I-6	Q41	K-13	TP2	E-3
IC21	M-4	Q42	K-13	TP3	D-4
IC22	G-6	Q43	J-14	TP4	N-13
IC23	E-6	Q44	J-13	TP5	N-14
IC24	E-6	Q45	J-13	TP6	N-15
IC25	D-5	Q46	I-14		
IC26	E-6	Q47	I-14		
IC27	C-5	Q48	I-13		
IC28	C-6	Q49	H-14		
IC29	D-10	Q50	H-13		
IC30	E-9	Q51	H-14		
IC31	F-10	Q52	H-13		
IC32	F-8	Q53	H-13		
IC33	L-10	Q54	F-13		
IC34	M-10	Q55	D-12		
IC37	I-10	Q56	K-15		
IC38	D-8	Q57	K-15		
IC39	I-9	Q58	K-16		
IC40	F-12	Q59	J-15		
IC41	F-14	Q60	J-15		
IC42	E-16	Q61	J-15		
IC43	B-15	Q62	I-15		
IC44	C-15	Q63	I-16		
IC45	B-15	Q64	H-15		
IC46	L-4	Q65	G-15		
IC47	J-8	Q66	G-16		
IC48	L-14	Q67	G-16		
IC49	C-9	Q68	G-15		
IC50	C-10	Q69	A-14		
IC51	C-10	Q70	B-13		
		Q71	A-13		
		Q72	K-9		
Q1	C-3	Q73	K-8		
Q2	C-1	Q74	J-8		
Q3	C-3	Q75	K-9		
Q4	G-2	Q76	K-10		
Q6	K-9	Q77	M-11		
Q7	K-8	Q78	F-11		

MS-33/33P (1/2) BOARD



BVP-370/P

C-71

C-72

A

B

C

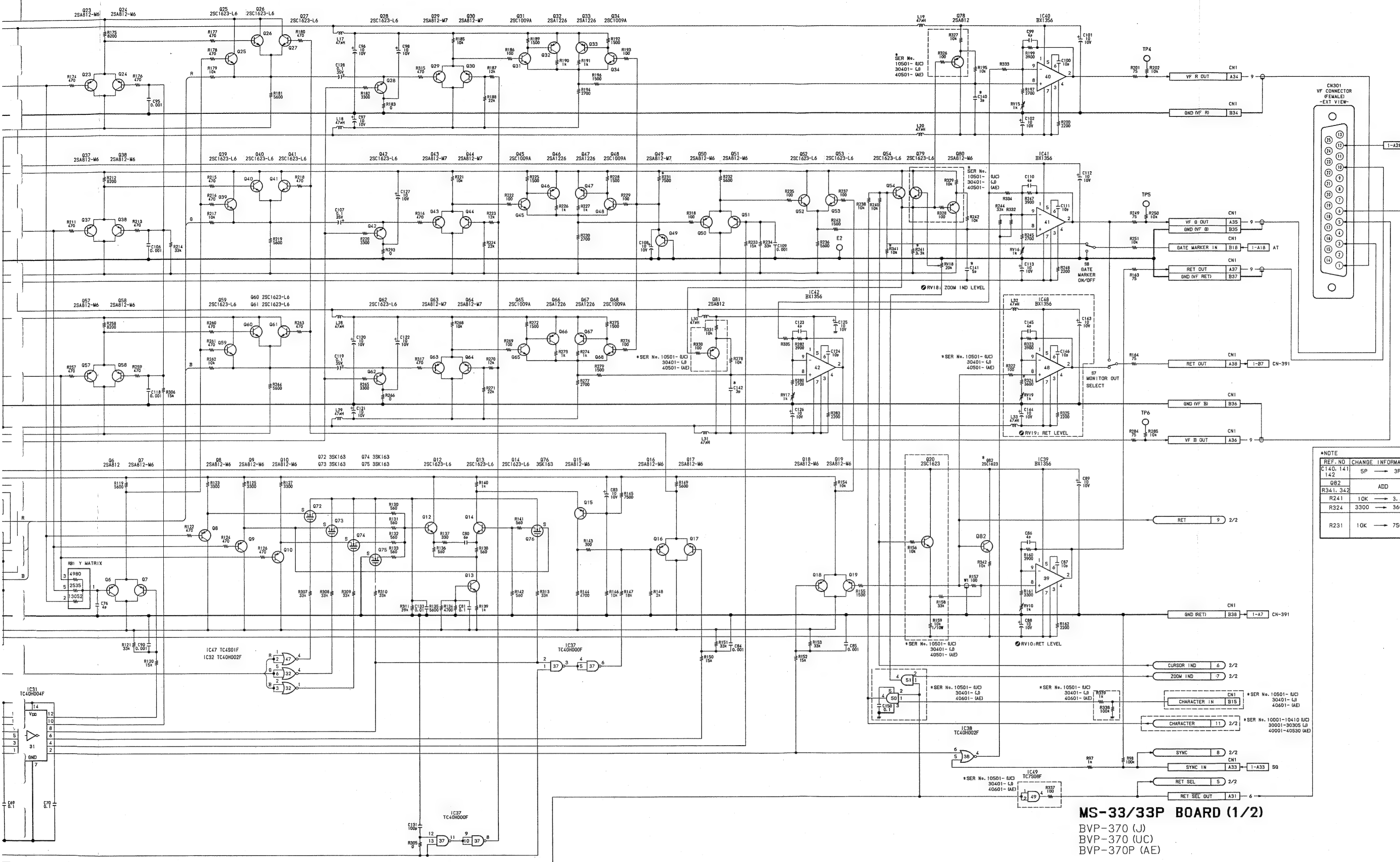
D

E

F

C

H



*NOTE

REF. NO	CHANGE INFORMATION	SER. NO
C140, 141, 142	SP → 3P	10501- (UC)
Q82	ADD	30401- (LJ)
R341, 342		40501- (AE)
R241	10K → 3.3K	
R324	3300 → 3600	
R231	10K → 7500	11201- (UC)
		30801- (LJ)
		41401- (AE)

MS-33/33P BOARD (1/2)

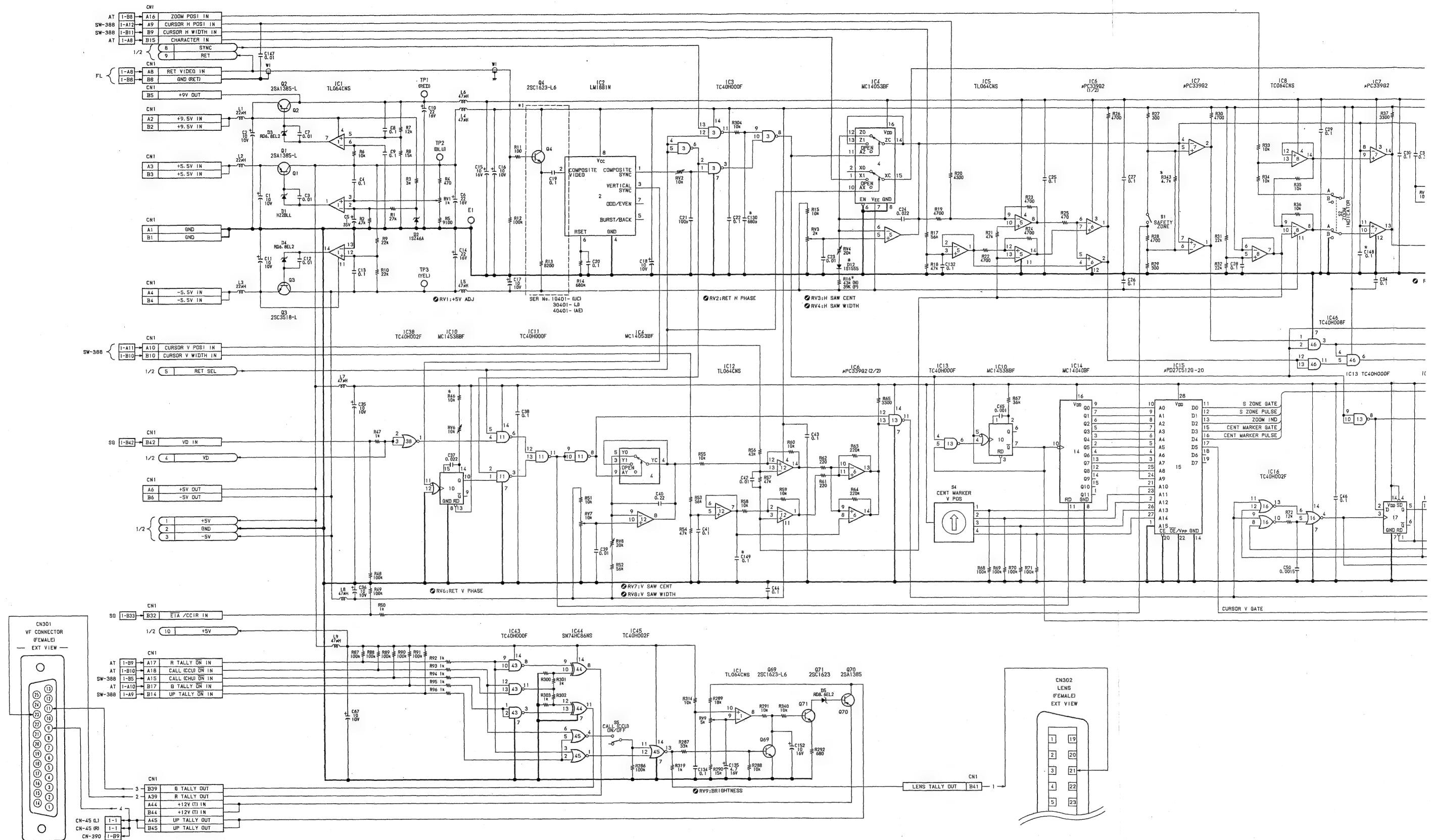
BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)

C-72

C-73

B-BVP370-MS33M#1

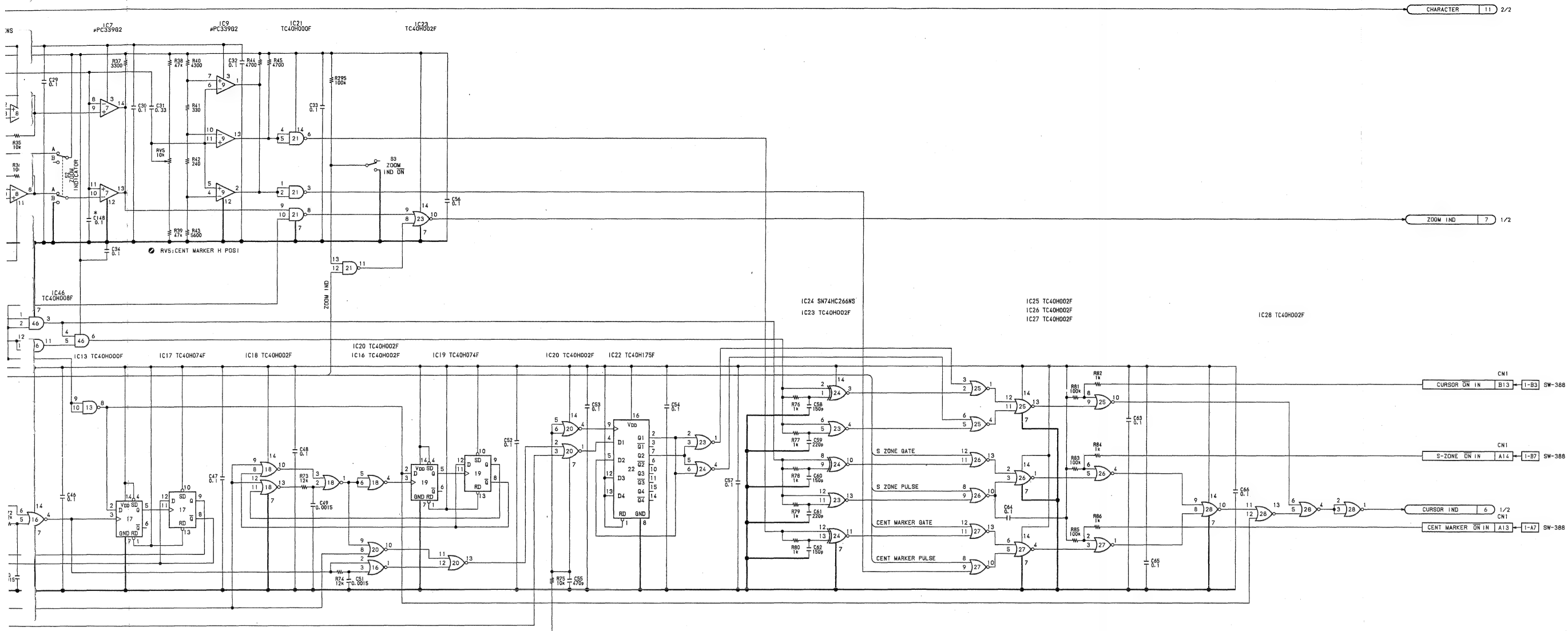
MS-33/33P (2/2) BOARD



BVP-370/P

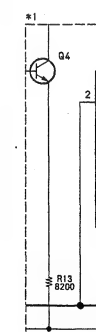
C-77

C-78



*NOTE

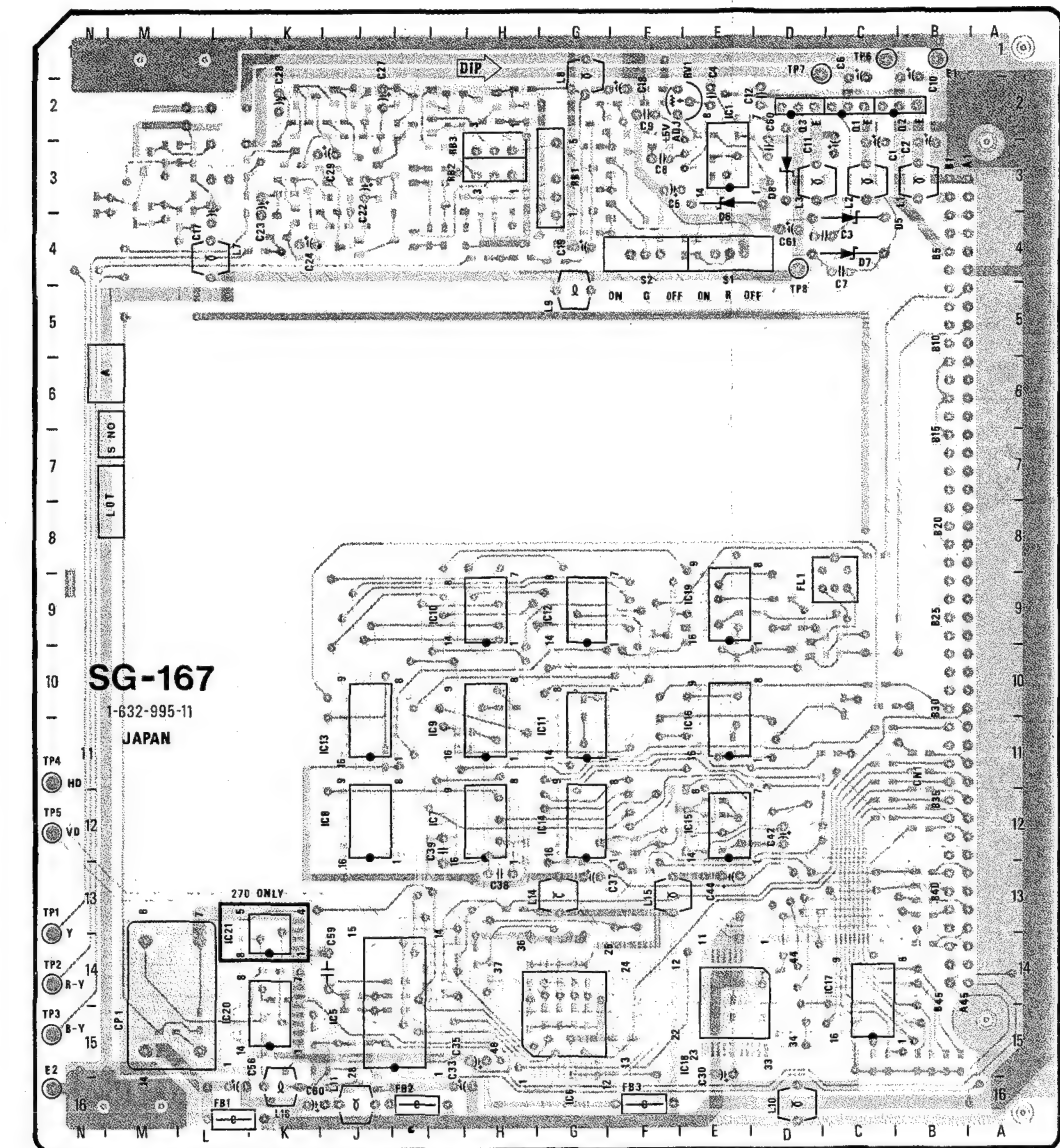
REF. NO	CHANGE INFORMATION	SER. NO
C130	100PF → 680PF	10501- (U)
D12	1S2835 → 1S1555	30401- (U)
R46	15K → 10K	40501- (AE)
C148	ADD	
C149		
R16	39K → 43K	11301- (U)
		30901- (U)



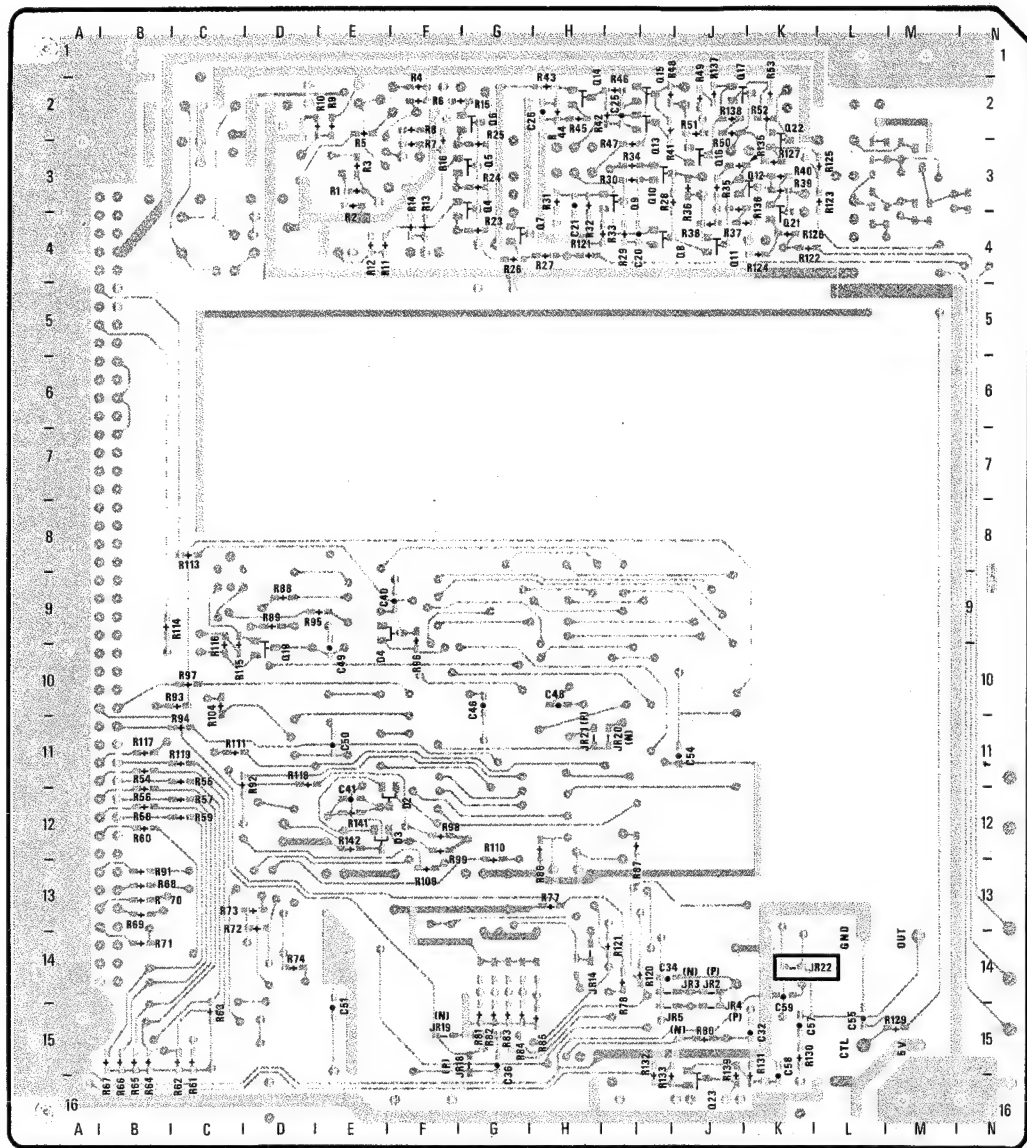
SER No. 10001-10315 (U)
30001-30305 (U)
40004-40320 (AE)

MS-33/33P BOARD (2/2)

BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)



1-632-995-11 COMPONENT SIDE



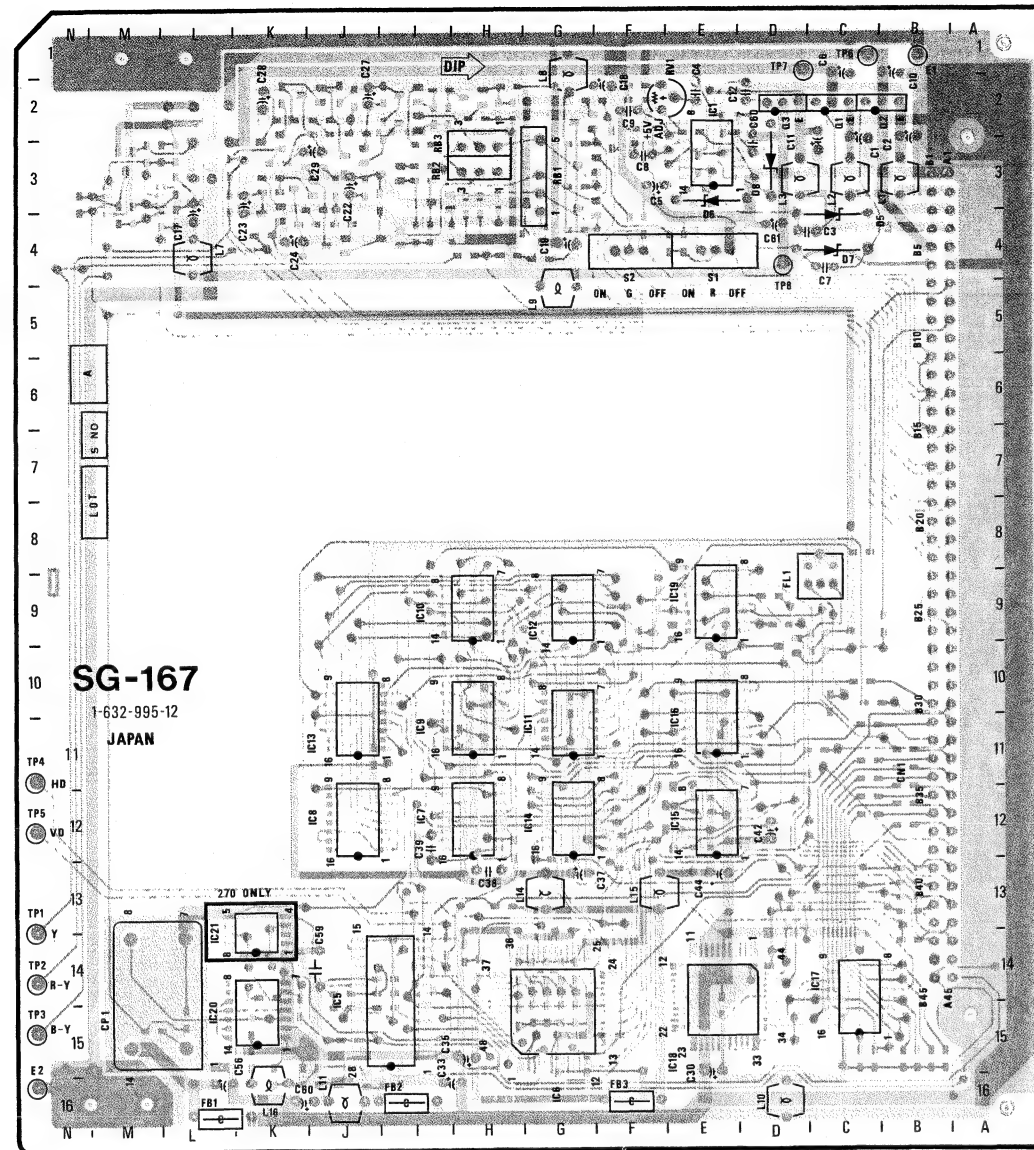
1-632-995-11 SOLDERING SIDE

SG-167/167P/167AP 1-632-995-11

CN1	B-11	S1	E-4
CP1	M-15	S2	F-4
D2	F-12	TP1	N-13
D3	F-12	TP2	N-14
D4	E-10	TP3	N-15
D5	C-4	TP4	N-11
D6	E-4	TP5	N-12
D7	C-4	TP6	C-1
D8	D-3	TP7	D-1
		TP8	D-4
E1	B-1		
E2	N-15		
FB1	L-16		
FB2	I-16		
FB3	F-16		
FL1	D-9		
IC1	E-2		
IC5	J-15		
IC6	G-16		
IC7	I-12		
IC8	J-12		
IC9	I-11		
IC10	H-9		
IC11	G-11		
IC12	G-9		
IC13	J-11		
IC14	G-12		
IC15	E-12		
IC16	E-11		
IC17	C-14		
IC18	E-15		
IC19	E-9		
IC20	L-15		
JR3	J-14		
JR5	I-15		
Q1	C-2		
Q2	B-2		
Q3	D-2		
Q4	G-3		
Q5	G-3		
Q6	G-2		
Q7	H-4		
Q8	J-4		
Q9	I-3		
Q10	I-3		
Q11	J-4		
Q12	K-3		
Q13	I-3		
Q14	H-2		
Q15	I-2		
Q16	J-3		
Q17	J-1		
Q19	D-10		
Q21	K-4		
Q22	K-2		
Q23	J-16		
RB1	G-3		
RB2	I-3		
RB3	I-3		
RV1	E-1		

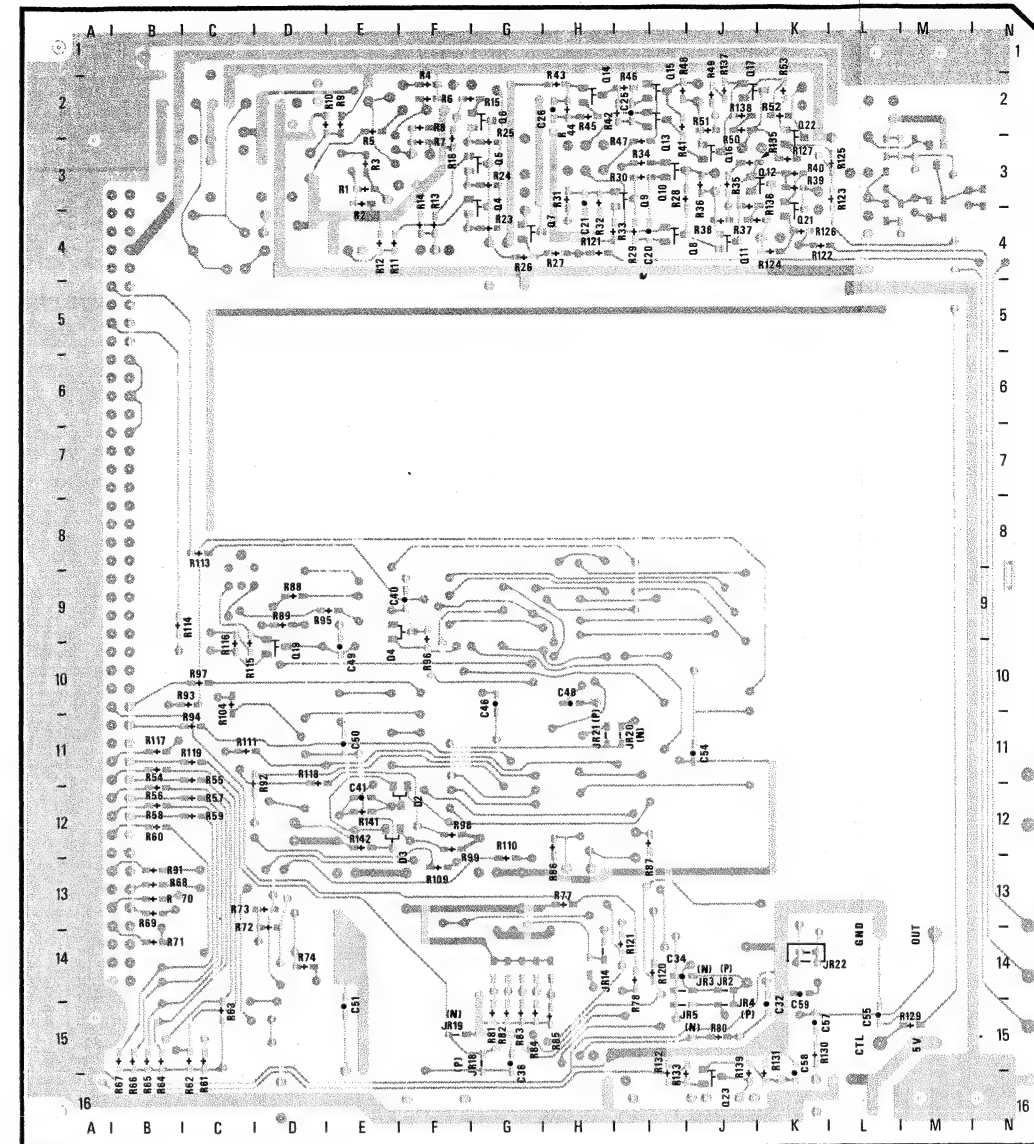
SG-167/167P/167AP BOARD

Serial No. 10501 - (UC)
30401 - (J)
40501 - (AE)



1-632-995-12 COMPONENT SIDE

C-82 (b)



1-632-995-12 SOLDERING SIDE

C-83 (b)

SG-16

CN1

CP1

D2

D3

D4

D5

D6

D7

D8

E1

E2

FB1

FB2

FB3

FL1

IC1

IC5

IC6

IC7

IC8

IC9

IC10

IC11

IC12

IC13

IC14

IC15

IC16

IC17

IC18

IC19

IC20

Q1

Q2

Q3

Q4

Q5

Q6

Q7

Q8

Q9

Q10

Q11

Q12

Q13

Q14

Q15

Q16

Q17

Q19

Q21

Q22

Q23

RB1

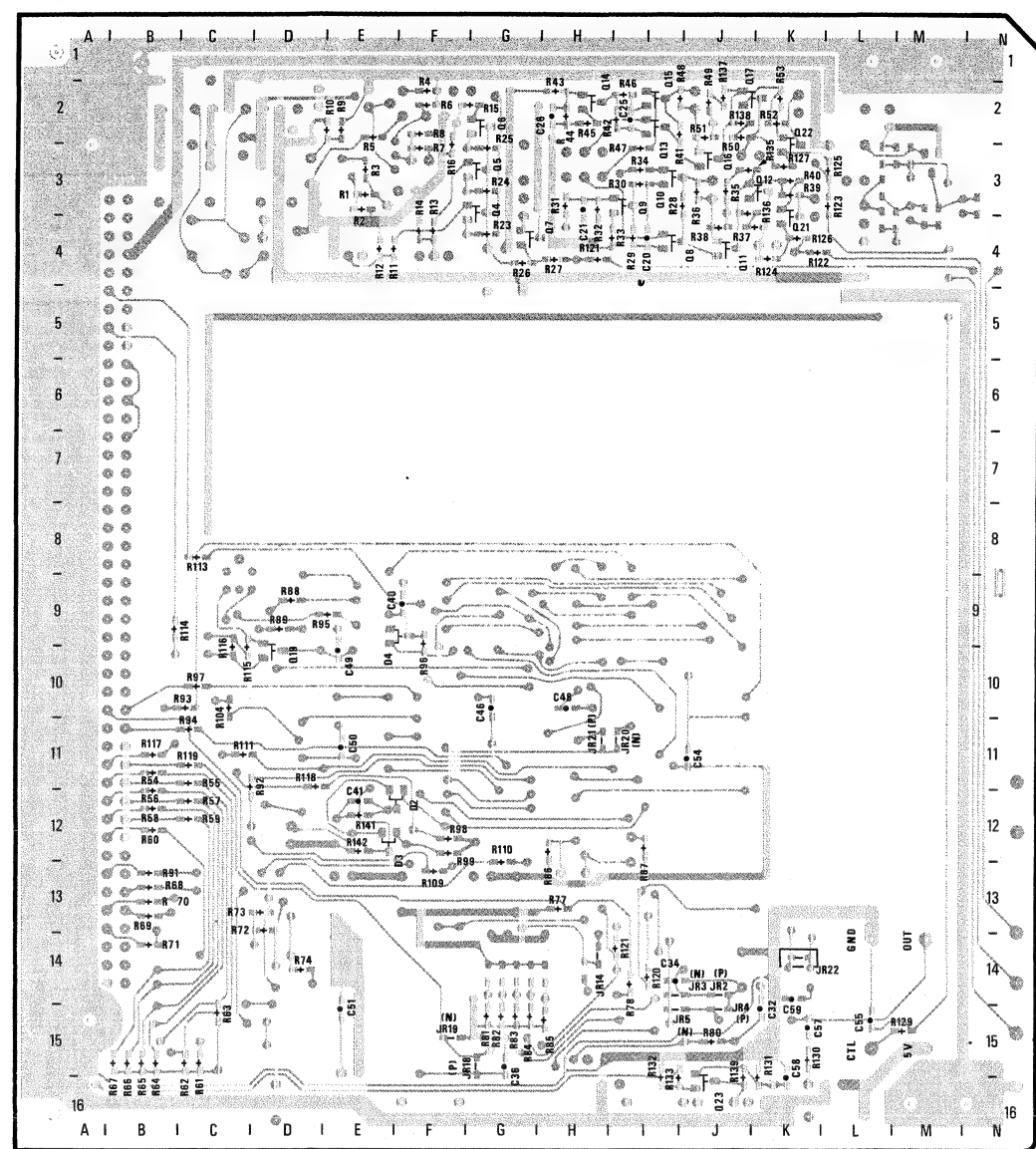
RB2

RB3

RV1

S1

S2

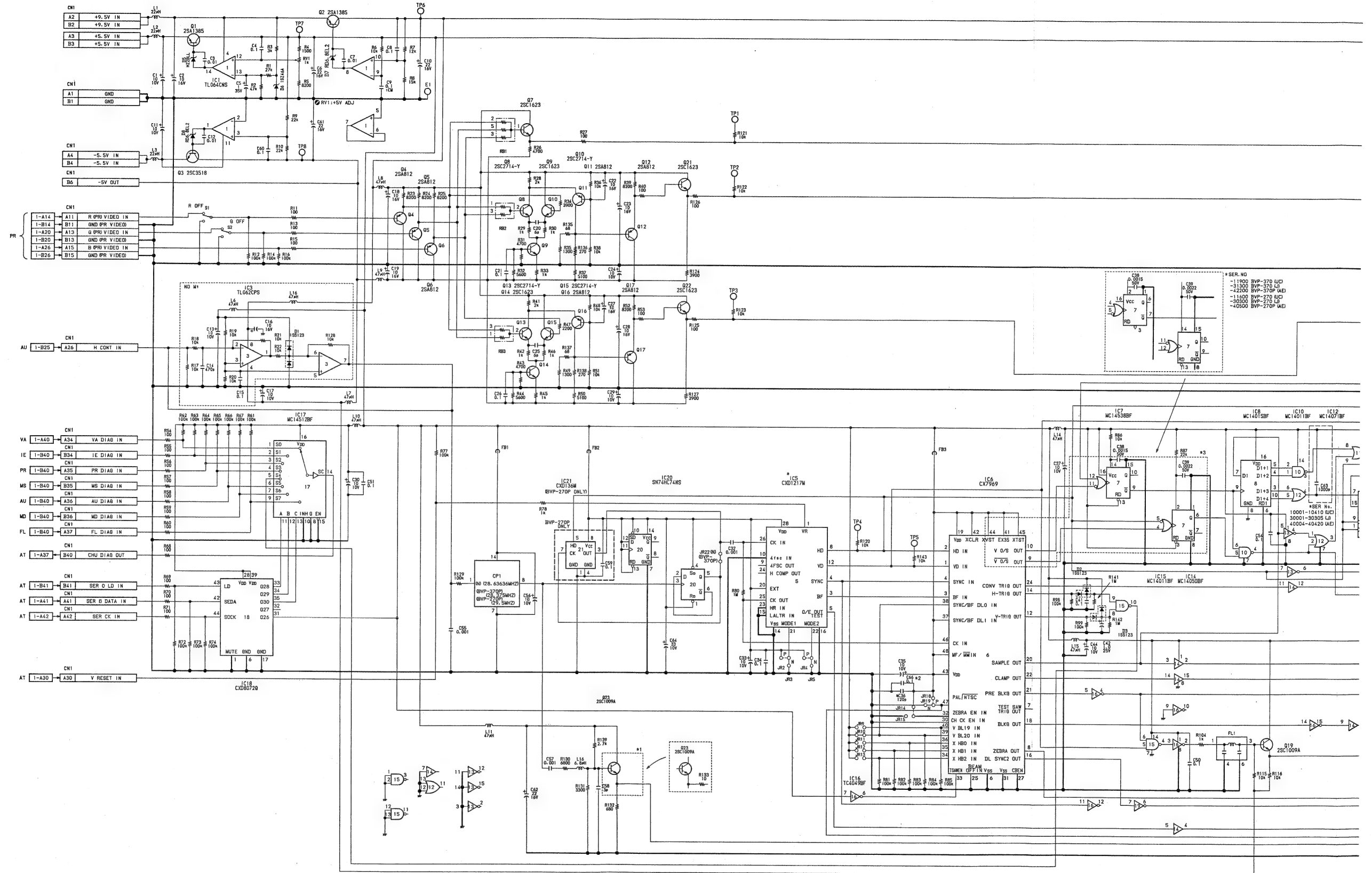


1-632-995-12 SOLDERING SIDE

SG-167 1-632-995-12

CN1	B-11	TP1	N-13
		TP2	N-14
CP1	M-15	TP3	N-15
		TP4	N-11
D2	F-12	TP5	N-12
D3	F-12	TP6	C-1
D4	E-10	TP7	D-1
D5	C-4	TP8	D-4
D6	E-4		
D7	C-4		
D8	D-3		
E1	B-1		
E2	N-15		
FB1	L-16		
FB2	I-16		
FB3	F-16		
FL1	D-9		
IC1	E-2		
IC5	J-15		
IC6	G-16		
IC7	I-12		
IC8	J-12		
IC9	I-11		
IC10	H-9		
IC11	G-11		
IC12	G-9		
IC13	J-11		
IC14	G-12		
IC15	E-12		
IC16	E-11		
IC17	C-14		
IC18	E-15		
IC19	E-9		
IC20	L-15		
Q1	C-2		
Q2	B-2		
Q3	D-2		
Q4	G-3		
Q5	G-3		
Q6	G-2		
Q7	H-4		
Q8	J-4		
Q9	I-3		
Q10	I-3		
Q11	J-4		
Q12	K-3		
Q13	I-3		
Q14	H-2		
Q15	I-2		
Q16	J-3		
Q17	J-1		
Q19	D-10		
Q21	K-4		
Q22	K-2		
Q23	J-16		
RB1	G-3		
RB2	I-3		
RB3	I-3		
RV1	E-1		
S1	F-4		
S2	F-4		

SG-167/167P/167AP BOARD



BVP-370/P
BVP-270/P

C-85

C-86

A

B

C

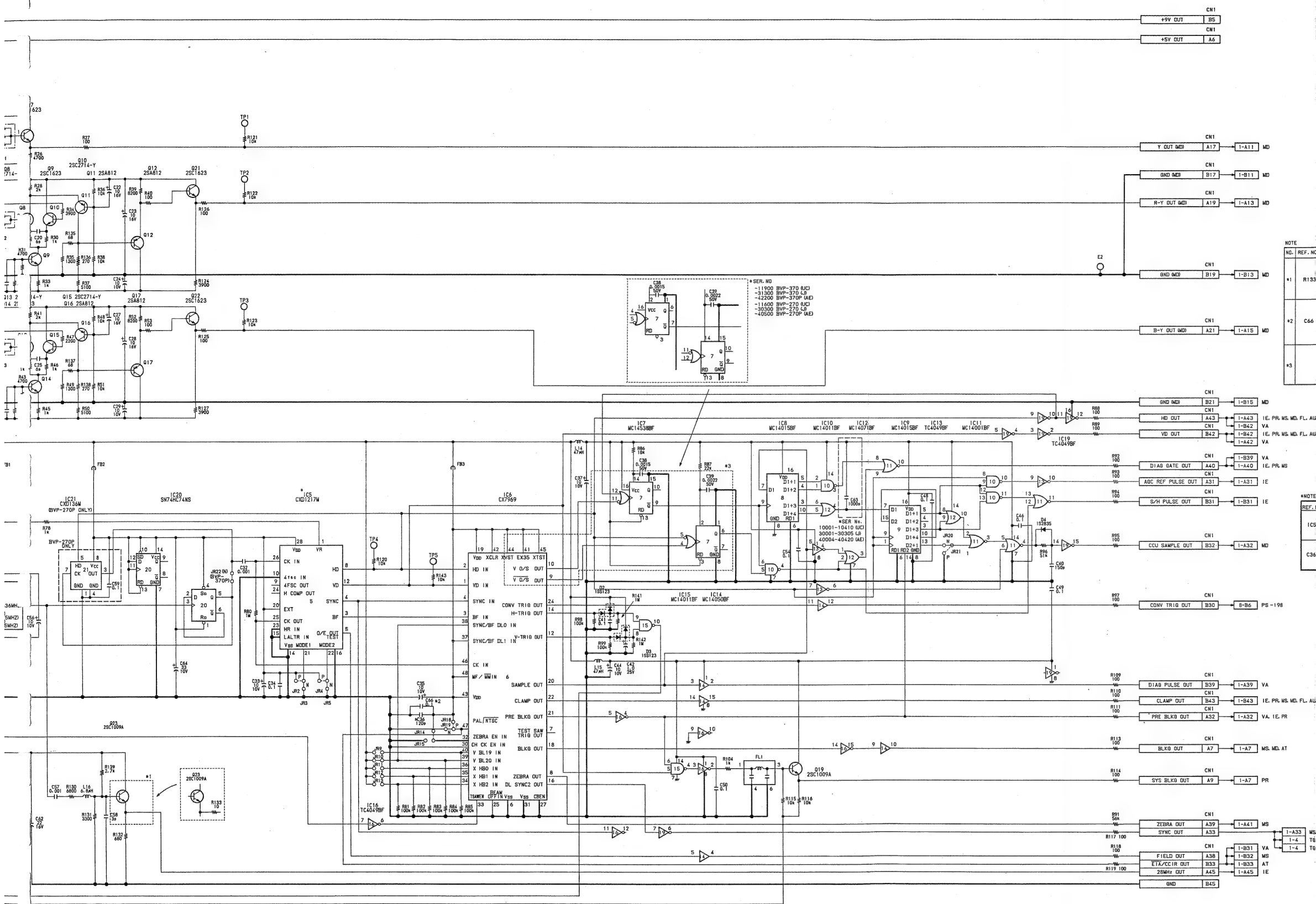
D

E

F

G

H



NOTE

NO.	REF. NO.	CHANGE INFORMATION	SER. NO.
#1	R133	DEL	11901- BVP-370:UC 31301- BVP-370:J 42401- BVP-370P:AE 11601- BVP-270:UC 30301- BVP-270:J 40501- BVP-270P:AE
#2	C66	ADD	11901- BVP-370:UC 31301- BVP-370:J 42201- BVP-370P:AE 11601- BVP-270:UC 30301- BVP-270:J 40501- BVP-270P:AE
#3			11901- BVP-370:UC 31301- BVP-370:J 42201- BVP-370P:AE 11601- BVP-270:UC 30301- BVP-270:J 40501- BVP-270P:AE

*NOTE

REF. NO	CHANGE INFORMATION	SER. NO.
IC5	CX7930A → CXD1217M	11601- BVP-370:UC 31301- BVP-370:J 41901- BVP-370P:AE 11901- BVP-270:UC 30101- BVP-270:J 43401- BVP-270P:AE
C36	0.1 → 120P	11601- BVP-370:UC 31301- BVP-370:J 42301- BVP-370P:AE 11901- BVP-270:UC 30101- BVP-270:J 40401- BVP-270P:AE

SG-167/167P BOARD
 BVP-370 (J)
 BVP-370 (UC)
 BVP-370P (AE)
 BVP-270 (J)
 BVP-270 (UC)

SG-167AP BOARD
 BVP-270P (AE)

C-86

C-87

B-BVP370-SG167M

E

F

G

H

I

J

K

L

1

2

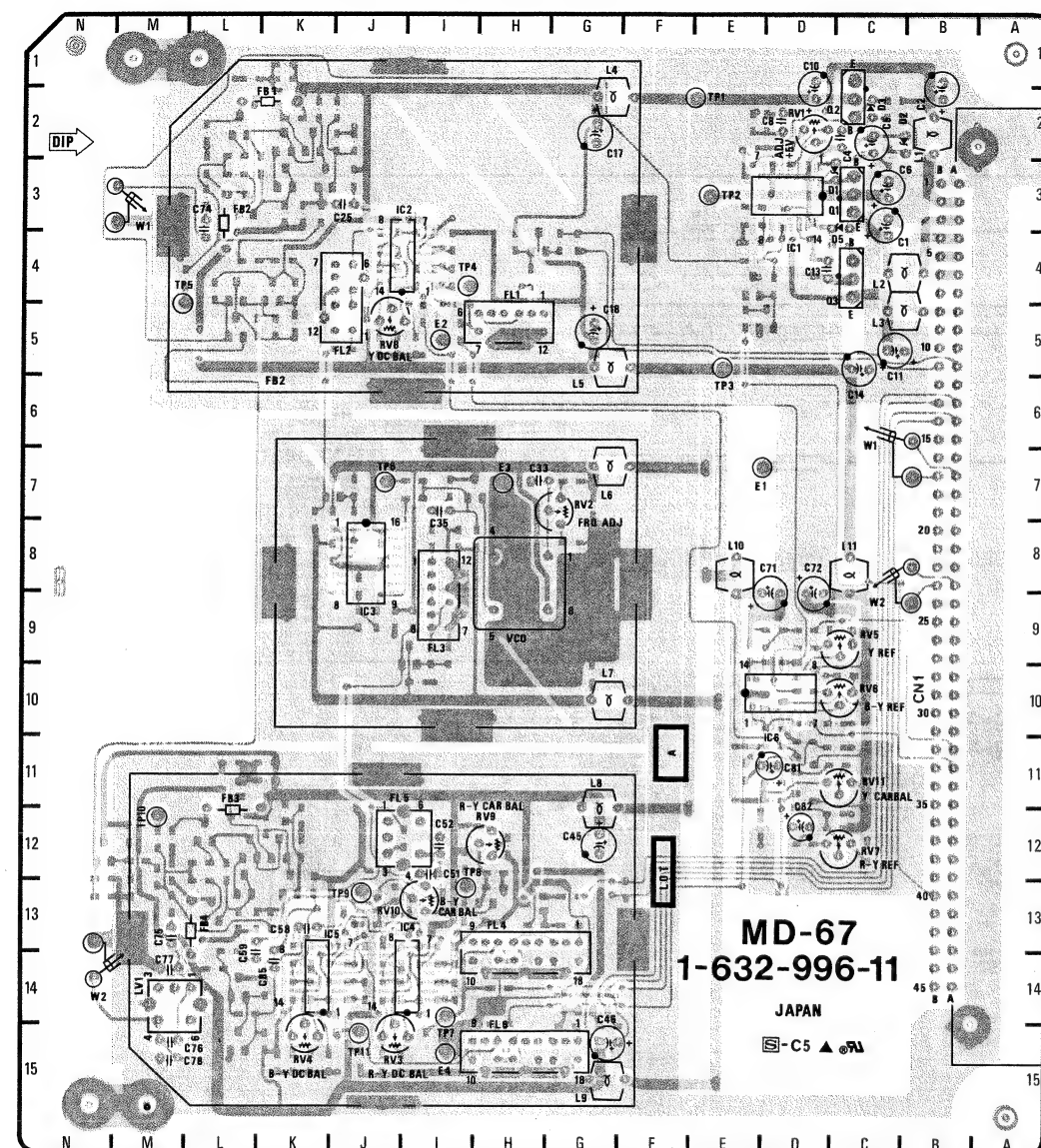
3

4

5

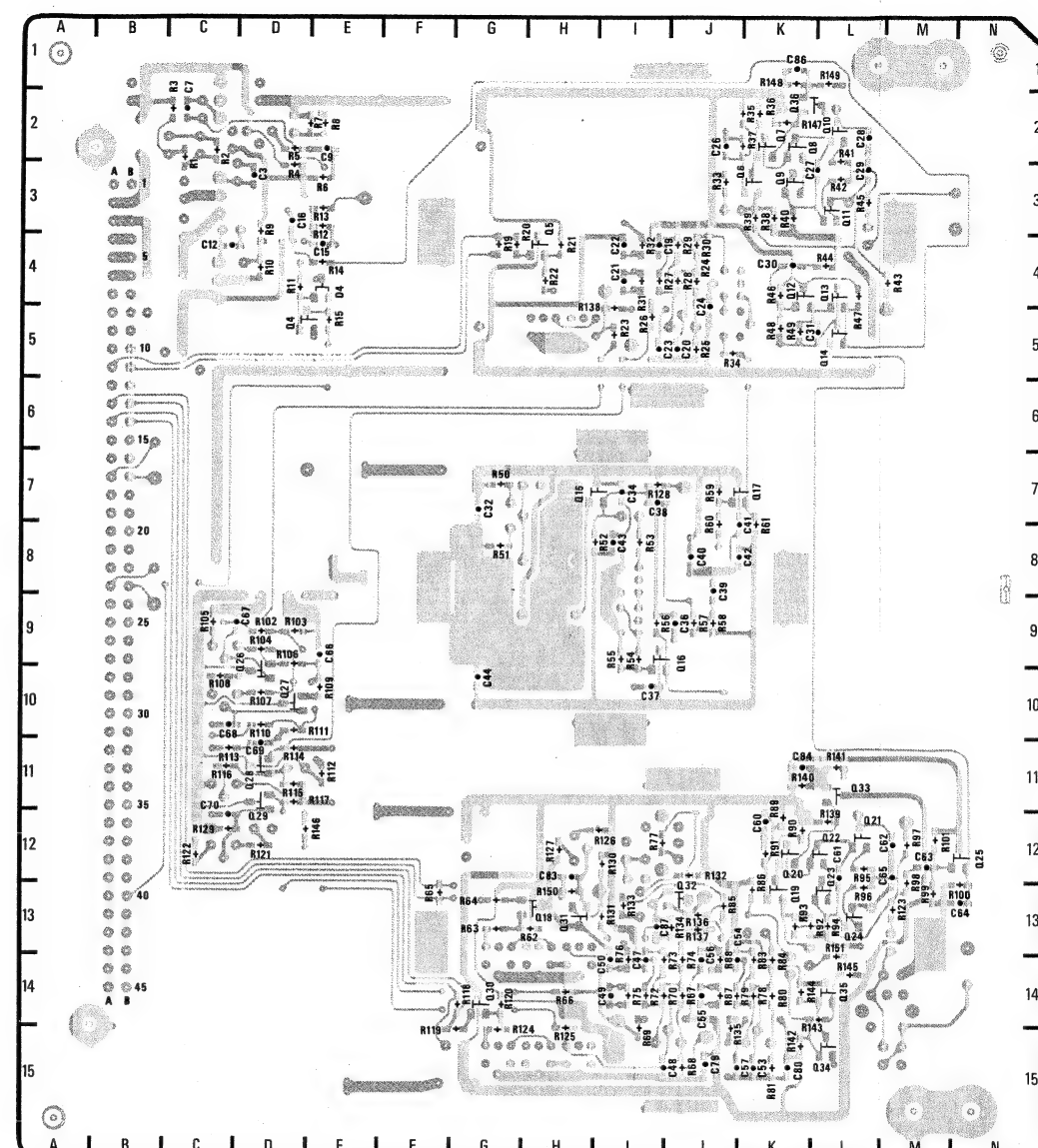
MD-67 BOARD

Serial No. 10001 - 10410 (UC)
30001 - 30305 (J)
40001 - 40420 (AE)



1-632-996-11 COMPONENT SIDE

C-88 (a)



1-632-996-11 SOLDERING SIDE

C-89 (a)

MD-67

CN1

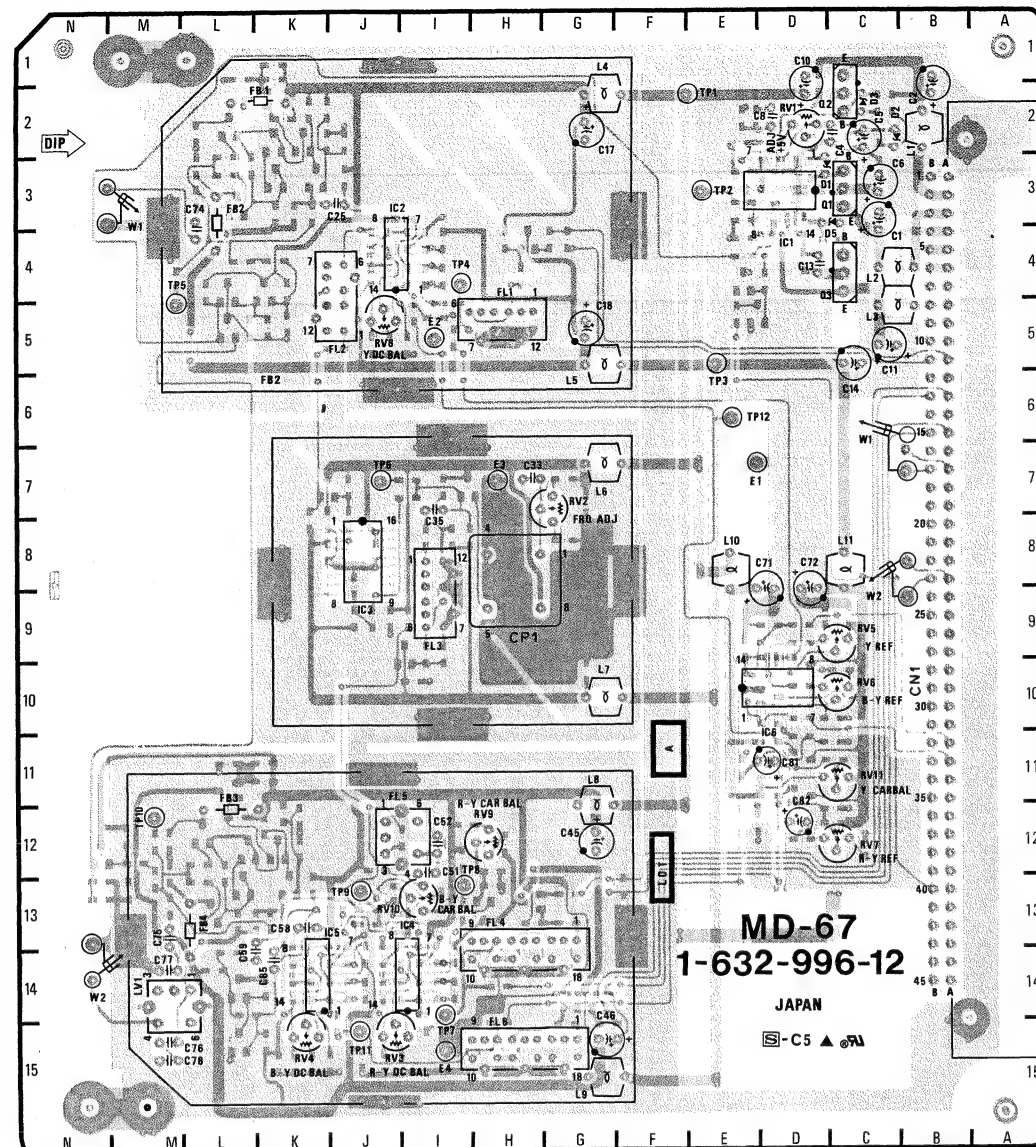
D1
D2
D3
D4
D5E1
E2
E3
E4FB1
FB2
FB3
FB4FL1
FL2
FL3
FL4
FL5
FL6IC1
IC2
IC3
IC4
IC5
IC6

LV1

Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
Q20
Q21
Q22
Q23
Q24
Q25
Q26
Q27
Q28
Q29
Q30
Q31
Q32
Q34
Q35
Q36

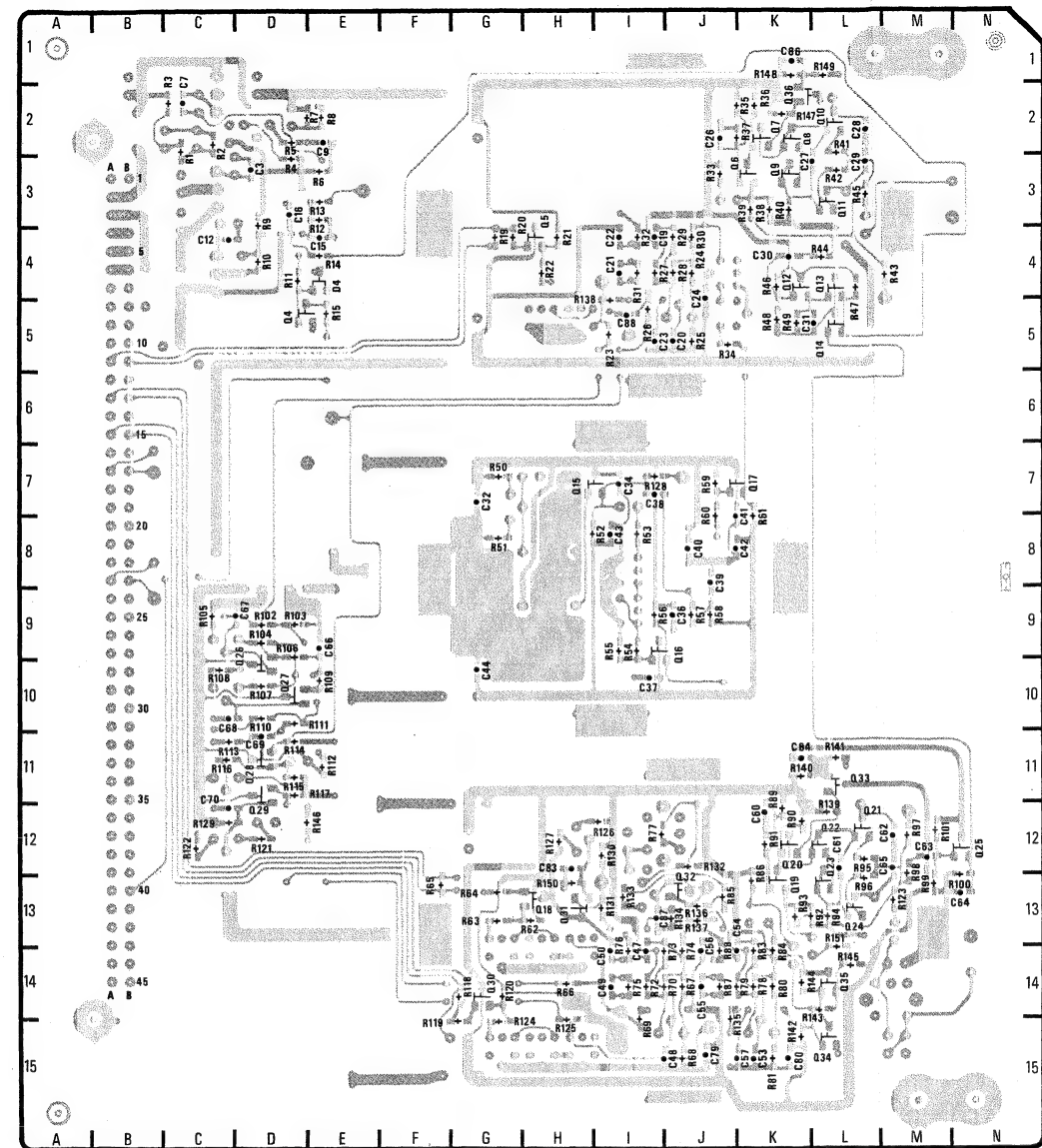
MD-67 BOARD

Serial No. 10501 - (UC)
30401 - (J)
40501 - (AE)



1-632-996-12 COMPONENT SIDE

C-88 (b)



1-632-996-12 SOLDERING SIDE

C-89 (b)

MD-67

CN1

CP1

D1

D2

D3

D4

D5

E1

E2

E3

E4

FB1

FB2

FB3

FB4

FL1

FL2

FL3

FL4

FL5

FL6

IC1

IC2

IC3

IC4

IC5

IC6

LV1

Q1

Q2

Q3

Q4

Q5

Q6

Q7

Q8

Q9

Q10

Q11

Q12

Q13

Q14

Q15

Q16

Q17

Q18

Q19

CN1

CP1

D1

D2

D3

D4

D5

E1

E2

E3

E4

FB1

FB2

FB3

FB4

FL1

FL2

FL3

FL4

FL5

FL6

IC1

IC2

IC3

IC4

IC5

IC6

LV1

Q1

Q2

Q3

Q4

Q5

Q6

Q7

Q8

Q9

Q10

Q11

Q12

Q13

Q14

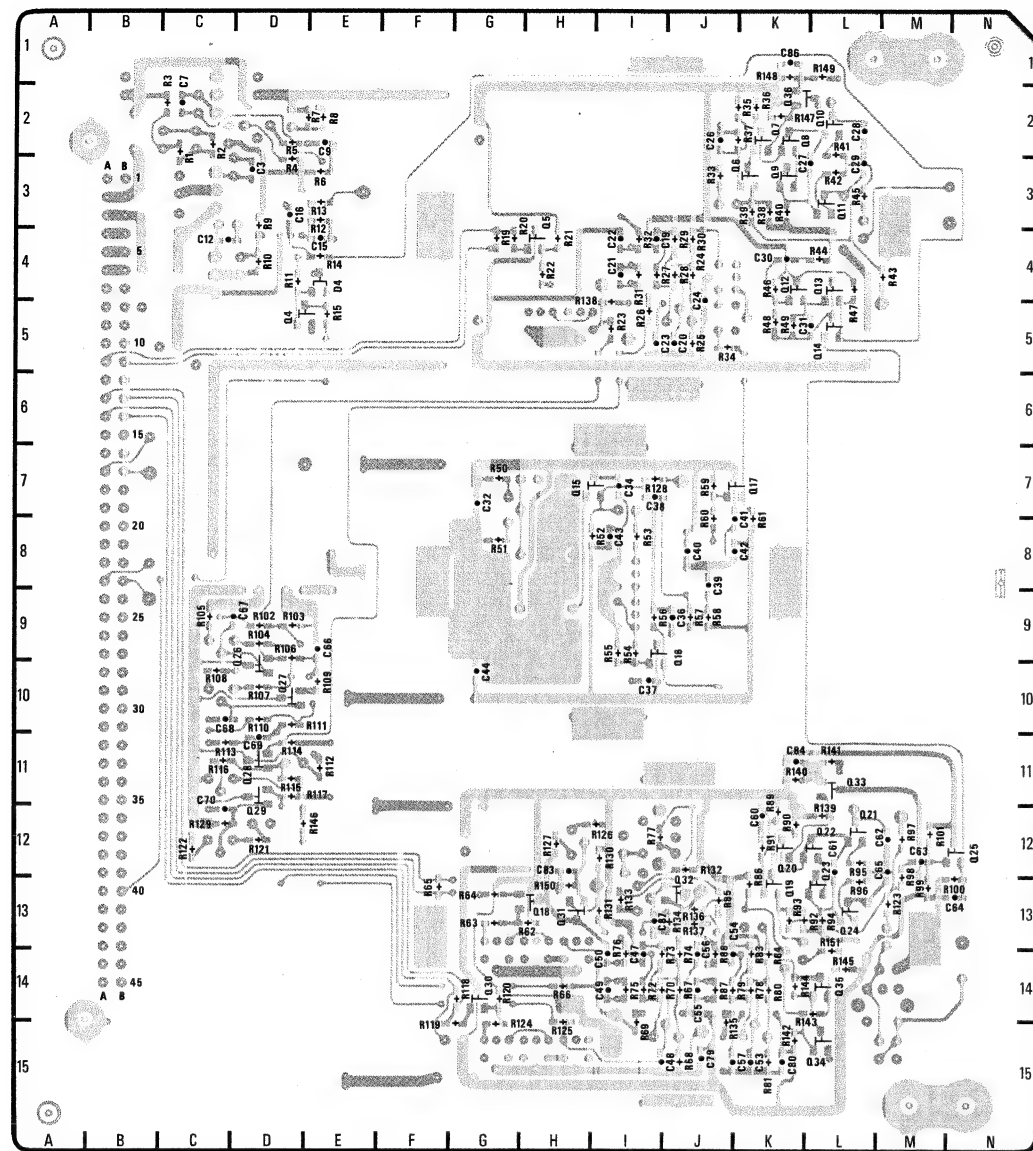
Q15

Q16

Q17

Q18

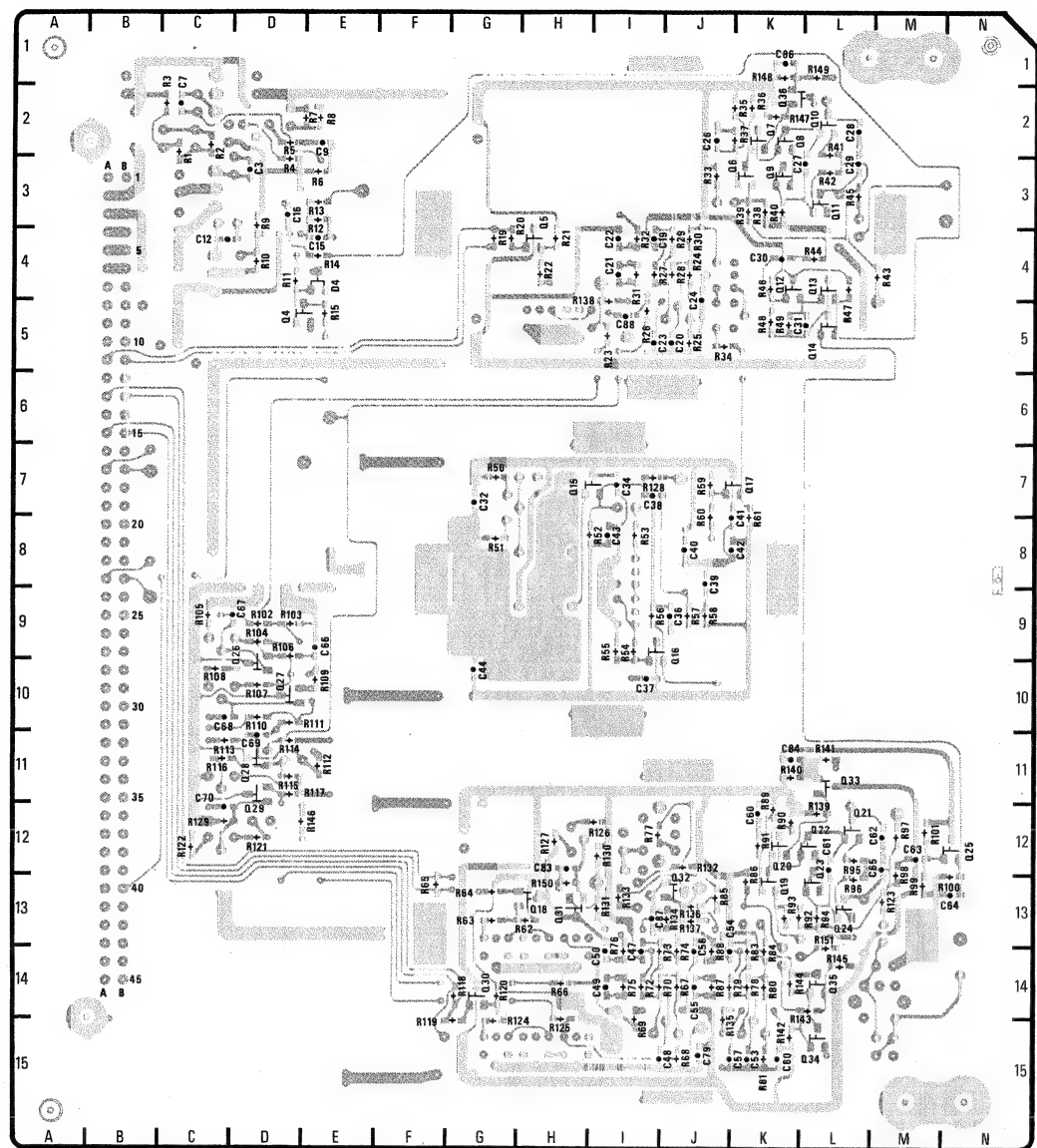
Q19



1-632-996-11 SOLDERING SIDE

MD-67 1-632-996-11

CN1	B-10	RV1	D-2
		RV2	G-7
D1	D-3	RV3	J-15
D2	C-2	RV4	K-15
D3	C-2	RV5	C-9
D4	E-4	RV6	C-10
D5	C-4	RV7	C-12
		RV8	J-5
E1	E-7	RV9	H-12
E2	I-5	RV10	J-13
E3	H-7	RV11	C-11
E4	I-15		
		TP1	E-2
FB1	K-2	TP2	E-3
FB2	L-3	TP3	E-6
FB3	L-11	TP4	I-4
FB4	L-13	TP5	M-4
		TP6	J-7
FL1	H-4	TP7	I-15
FL2	J-5	TP8	I-12
FL3	I-9	TP9	J-13
FL4	H-13	TP10	M-12
FL5	J-11	TP11	J-15
FL6	H-15		
IC1	D-4		
IC2	J-3		
IC3	J-9		
IC4	I-13		
IC5	K-13		
IC6	D-10		
LV1	M-14		
Q1	C-3		
Q2	D-2		
Q3	C-4		
Q4	D-5		
Q5	H-3		
Q6	J-3		
Q7	K-2		
Q8	K-2		
Q9	K-3		
Q10	L-2		
Q11	L-3		
Q12	K-4		
Q13	L-4		
Q14	L-5		
Q15	H-7		
Q16	J-9		
Q17	K-7		
Q18	H-13		
Q19	K-13		
Q20	K-12		
Q21	L-12		
Q22	L-12		
Q23	L-12		
Q24	L-13		
Q25	N-12		
Q26	D-9		
Q27	D-10		
Q28	D-11		
Q29	D-12		
Q30	G-14		
Q31	H-13		
Q32	J-13		
Q34	L-15		
Q35	L-14		
Q36	K-2		



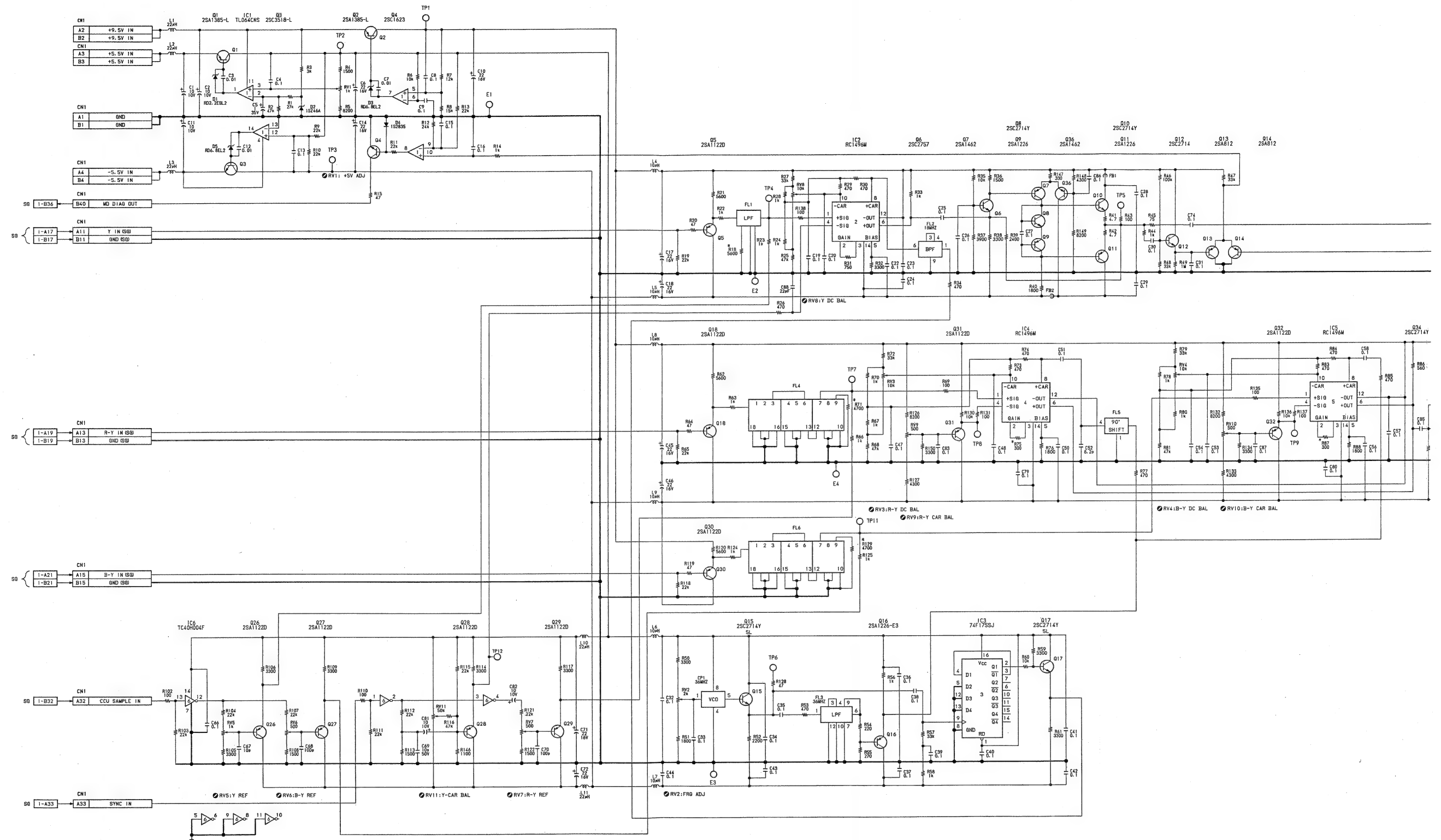
1-632-996-12 SOLDERING SIDE

C-89 (b)

MD-67 1-632-996-12			
CN1	B-10	Q36	K-2
CP1	H-9	RV1	D-2
		RV2	G-7
D1	D-3	RV3	J-15
D2	C-2	RV4	K-15
D3	C-2	RV5	C-9
D4	E-4	RV6	C-10
D5	C-4	RV7	C-12
		RV8	J-5
E1	E-7	RV9	H-12
E2	I-5	RV10	J-13
E3	H-7	RV11	C-11
E4	I-15		
FB1	K-2	TP1	E-2
FB2	L-3	TP2	E-3
FB3	L-11	TP3	E-6
FB4	L-13	TP4	I-4
		TP5	M-4
		TP6	J-7
FL1	H-4	TP7	I-15
FL2	J-5	TP8	I-12
FL3	I-9	TP9	J-13
FL4	H-13	TP10	M-12
FL5	J-11	TP11	J-15
FL6	H-15	TP12	E-6
IC1	D-4		
IC2	J-3		
IC3	J-9		
IC4	I-13		
IC5	K-13		
IC6	D-10		
LV1	M-14		
Q1	C-3		
Q2	D-2		
Q3	C-4		
Q4	D-5		
Q5	H-3		
Q6	J-3		
Q7	K-2		
Q8	K-2		
Q9	K-3		
Q10	L-2		
Q11	L-3		
Q12	K-4		
Q13	L-4		
Q14	L-5		
Q15	H-7		
Q16	J-9		
Q17	K-7		
Q18	H-13		
Q19	K-13		
Q20	K-12		
Q21	L-12		
Q22	L-12		
Q23	L-12		
Q24	L-13		
Q25	N-12		
Q26	D-9		
Q27	D-10		
Q28	D-11		
Q29	D-12		
Q30	G-14		
Q31	H-13		
Q32	J-13		
Q34	L-15		
Q35	L-14		

C-90 (b)

MD-67 BOARD

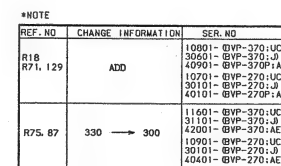


BVP-370/P
BVP-270/P

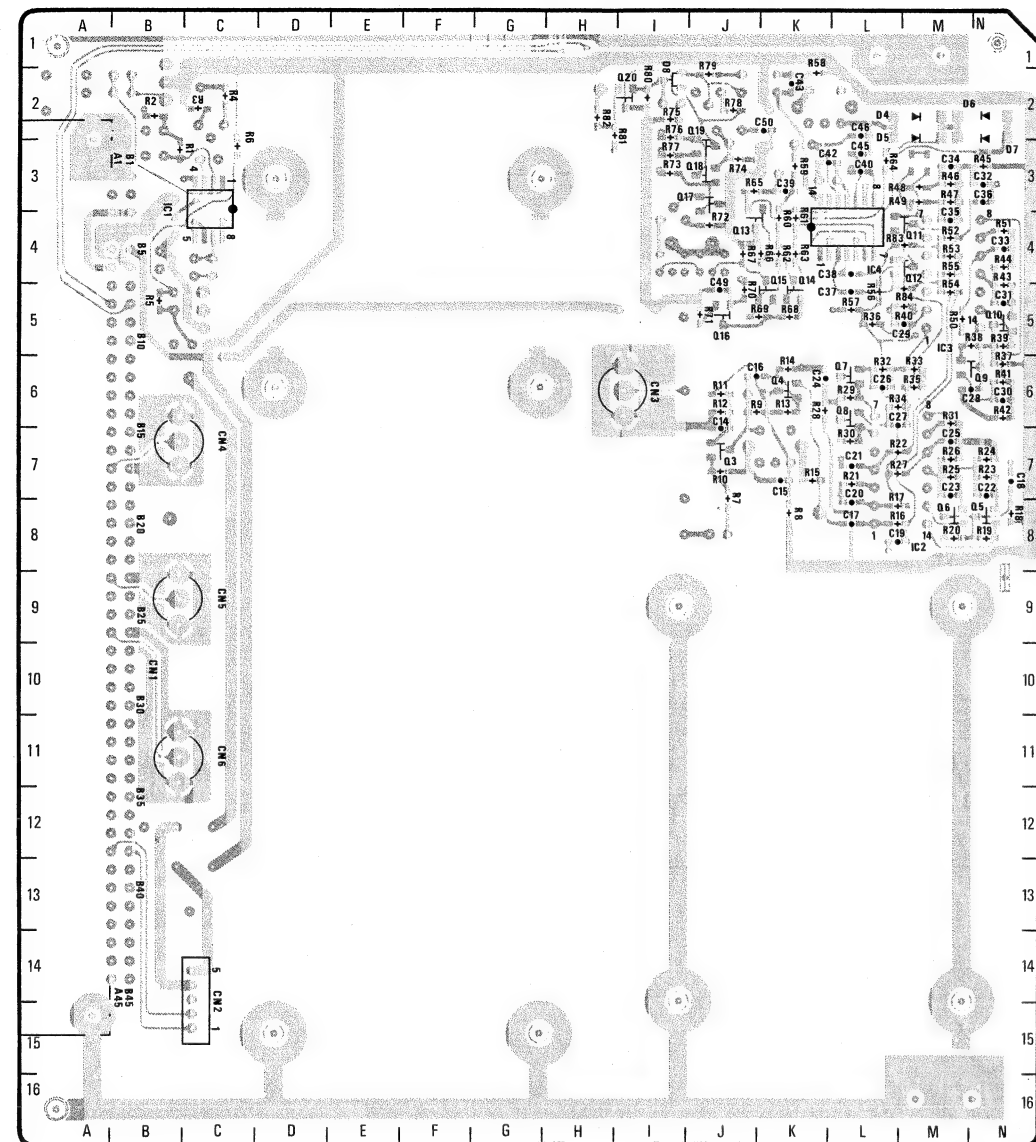
C-91

C-92

A B C D E F G H



BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)
BVP-270 (J)
BVP-270 (UC)
BVP-270P (AE)



1-632-997-11 SOLDERING SIDE

FL-89 1-632-997-11

CN1 B-10
 CN2 C-14
 CN3 I-6
 CN4 C-7
 CN5 C-9
 CN6 C-11

D1 B-2
 D2 B-2
 D3 C-4
 D4 L-2
 D5 L-2
 D6 M-2
 D7 N-3
 D8 I-2

E1 C-8
 FL1 N-14
 FL2 J-7
 FL3 J-5

IC1 B-3
 IC2 M-8
 IC3 M-5
 IC4 L-4

LV1 K-7
 LV2 K-2

Q1 B-1
 Q2 C-5
 Q3 J-7
 Q4 K-6
 Q5 N-8
 Q6 M-8
 Q7 L-6
 Q8 L-6
 Q9 N-6
 Q10 N-5
 Q11 M-4
 Q12 M-4
 Q13 J-4
 Q14 K-4
 Q15 K-4
 Q16 J-5
 Q17 J-3
 Q18 J-3
 Q19 J-2
 Q20 I-2

RV1 C-2
 RV2 J-3
 RV4 J-2

TP1 C-1
 TP2 C-6
 TP3 K-8
 TP4 H-2

FL-89 1-632-997-12

CN1 B-10
CN2 C-14
CN3 I-6
CN4 C-7
CN5 C-9
CN6 C-11

D1 B-2
D2 B-2
D3 C-4
D4 L-2
D5 L-2
D6 M-2
D7 N-3
D8 I-2

E1 C-8
FL1 N-14
FL2 J-7
FL3 J-5

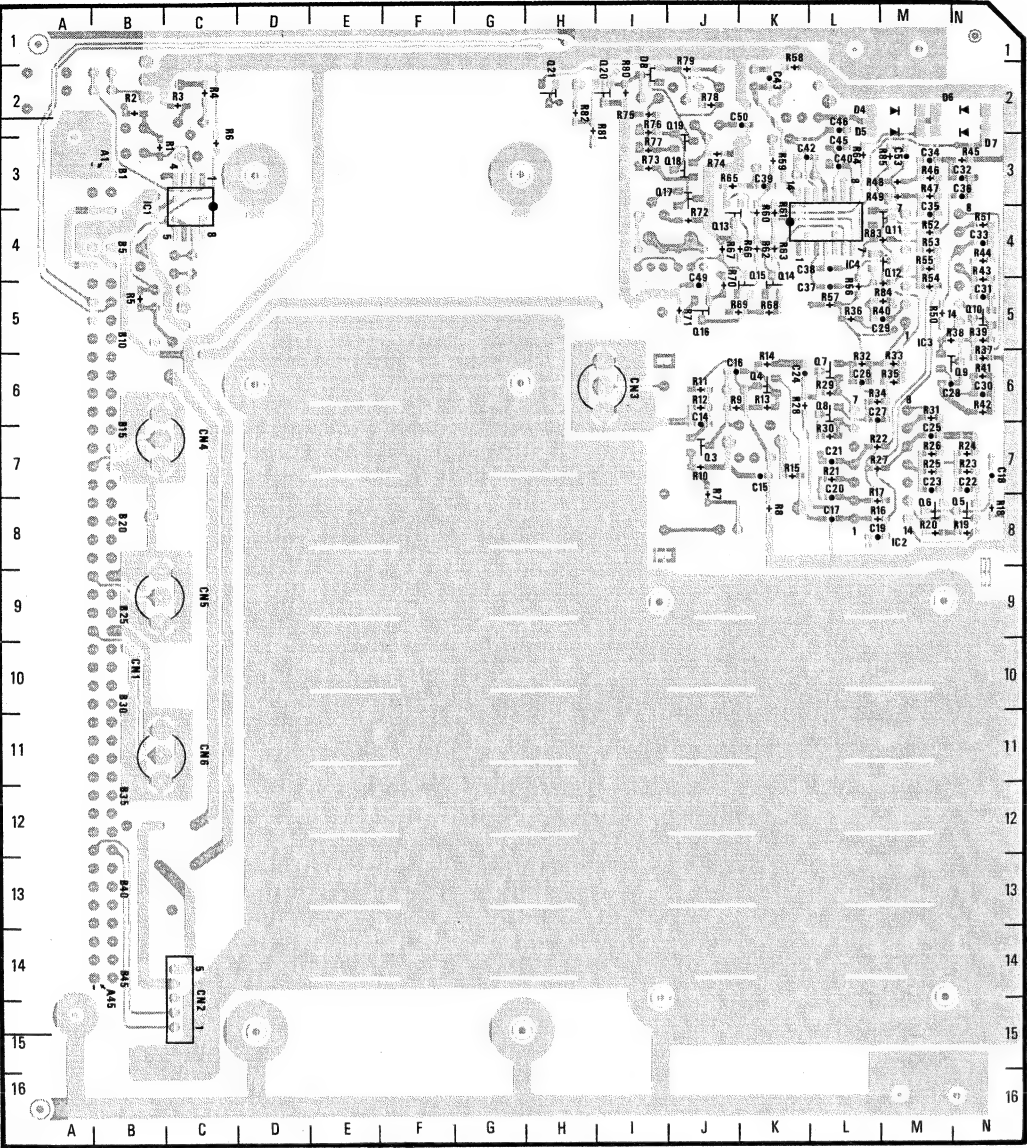
IC1 B-3
IC2 M-8
IC3 M-5
IC4 L-4

LV1 K-7
LV2 K-2

Q1 B-1
Q2 C-5
Q3 J-7
Q4 K-6
Q5 N-8
Q6 M-8
Q7 L-6
Q8 L-6
Q9 N-6
Q10 N-5
Q11 M-4
Q12 M-4
Q13 J-4
Q14 K-4
Q15 K-4
Q16 J-5
Q17 J-3
Q18 J-3
Q19 J-2
Q20 I-2
Q21 H-2

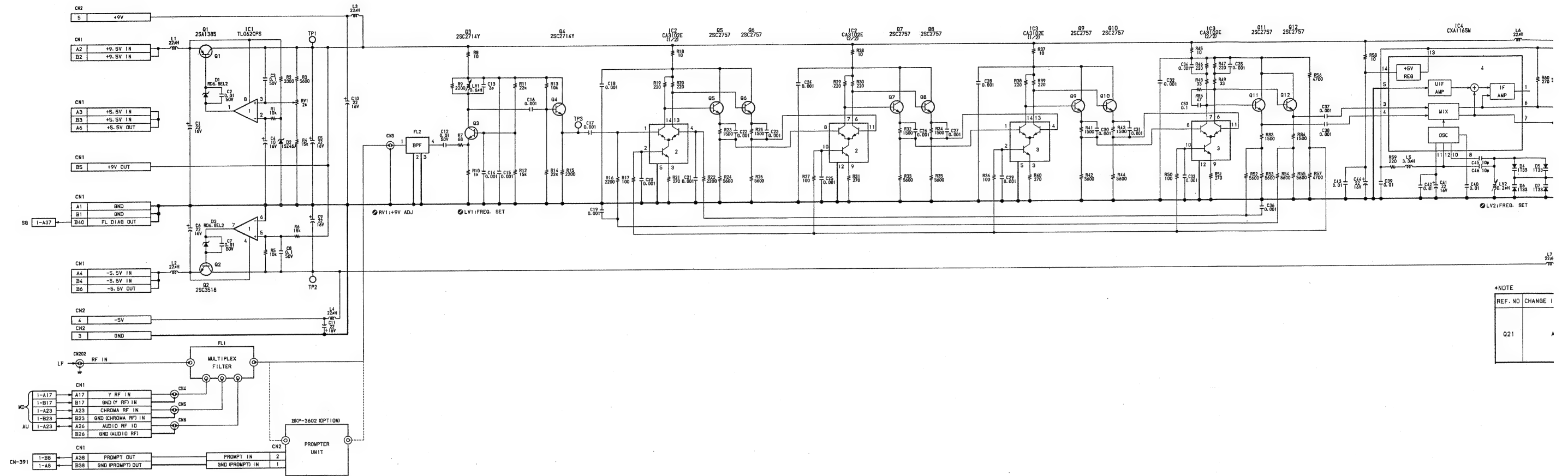
RV1 C-2
RV2 J-3
RV4 J-2

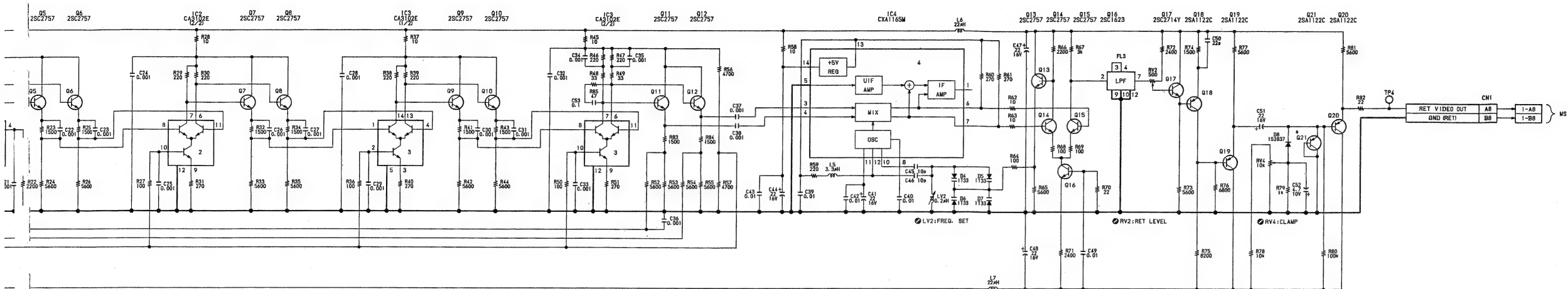
TP1 C-1
TP2 C-6
TP3 K-8
TP4 H-2



1-632-997-12 SOLDERING SIDE

FL-89 BOARD





*NOTE		
REF. NO	CHANGE INFORMATION	SER. NO
Q21	ADD	11401- BVP-370-UCJ 30901- BVP-370-UCJ 41601- BVP-370P(AE) 10901- BVP-270-UCJ 30101- BVP-270-UCJ 40401- BVP-270P(AE)

FL-89 BOARD

BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)
BVP-270 (J)
BVP-270 (UC)
BVP-270P (AE)

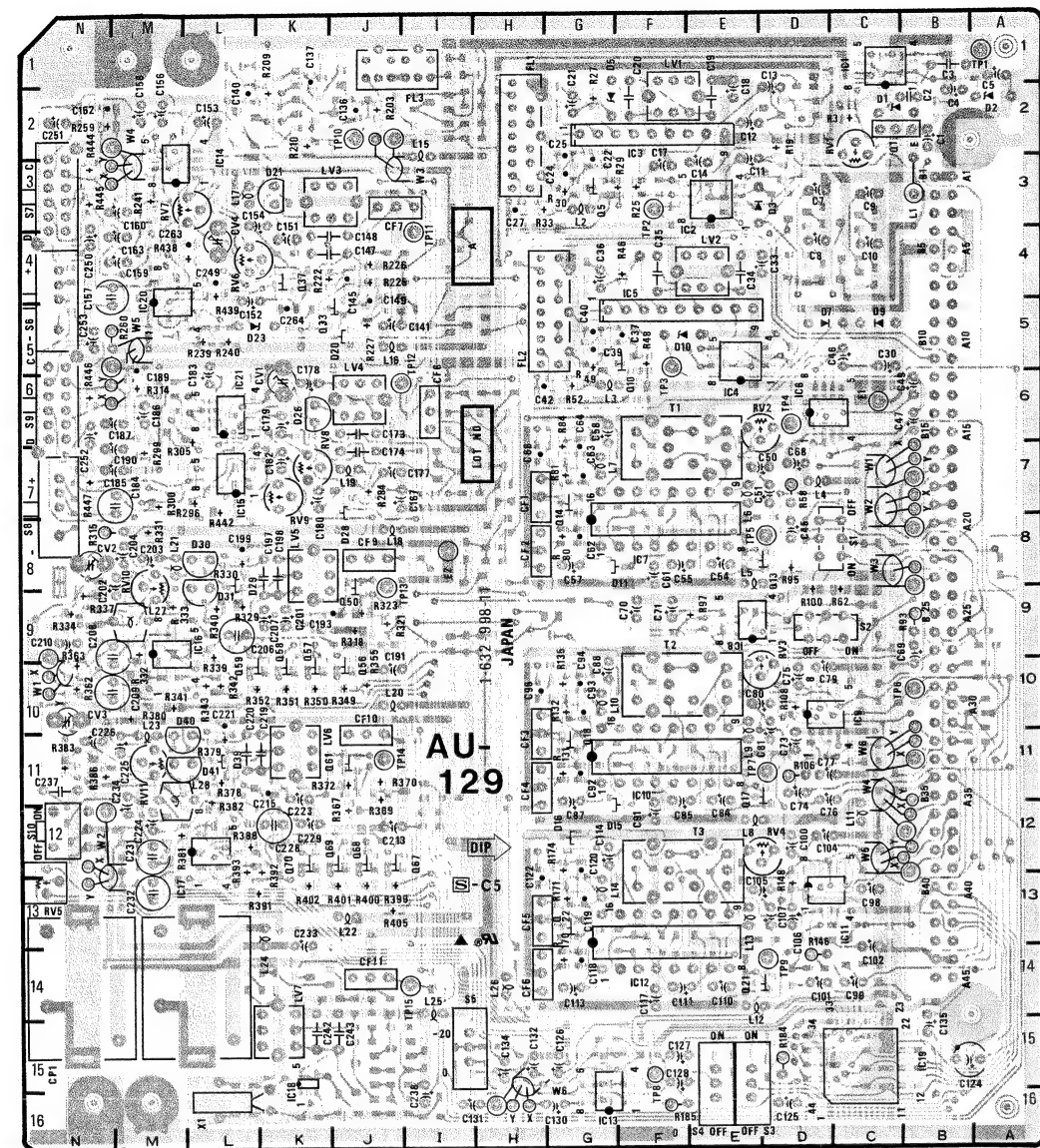
C-98

C-99

B-BVP370-FL89M

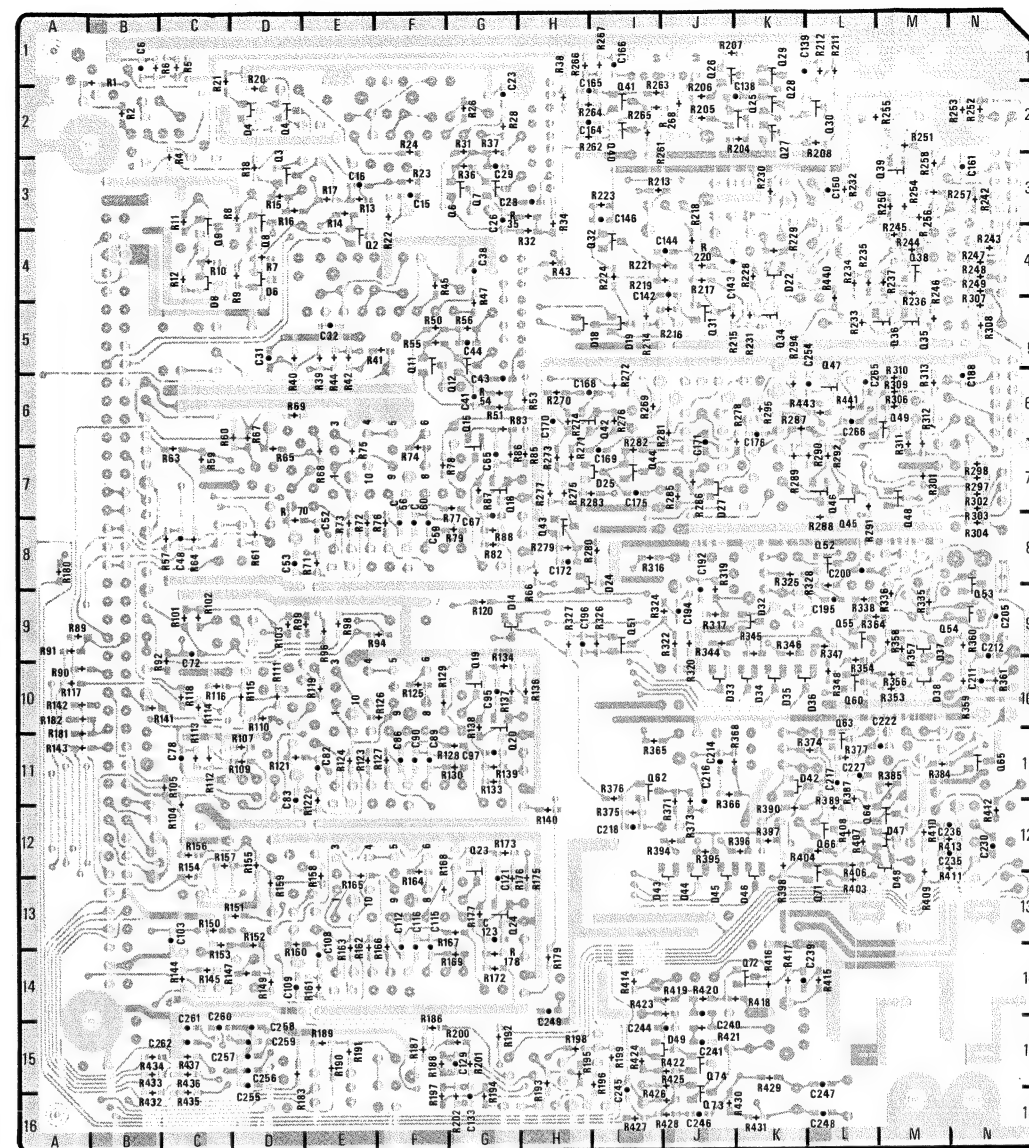
AU-129/129P BOARD

Serial No. 10001 - 10210 (UC)
30001 - 30205 (J)
40001 - 40210 (AE)



1-632-998-11 COMPONENT SIDE

C-100 (a)



1-632-998-11 SOLDERING SIDE

C-101 (a)

AU-129/1

CF1
CF2
CF3
CF4
CF5
CF6
CF7
CF8
CF9
CF10
CF11

CN1

CP1

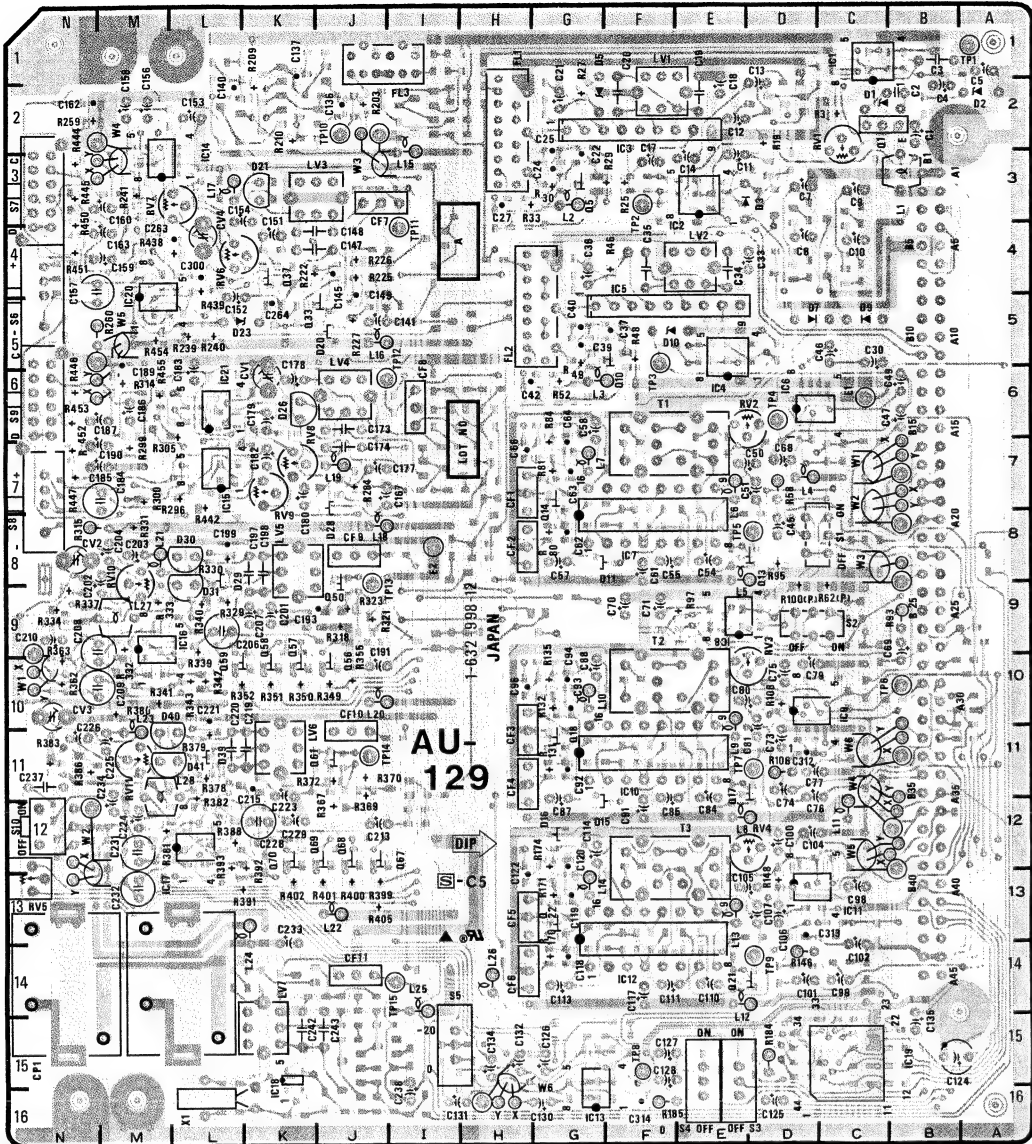
D1
D2
D3
D4
D5
D6
D7
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D9
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D11
D14
D15
D16
D18
D19
D20
D21
D22
D23
D24
D25
D26
D27
D28
D29
D30
D31
D32
D33
D34
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D39
D40
D41
D42
D43
D44
D45
D46
D47
D48
D49

E1
E2

FL1
FL2
FL3

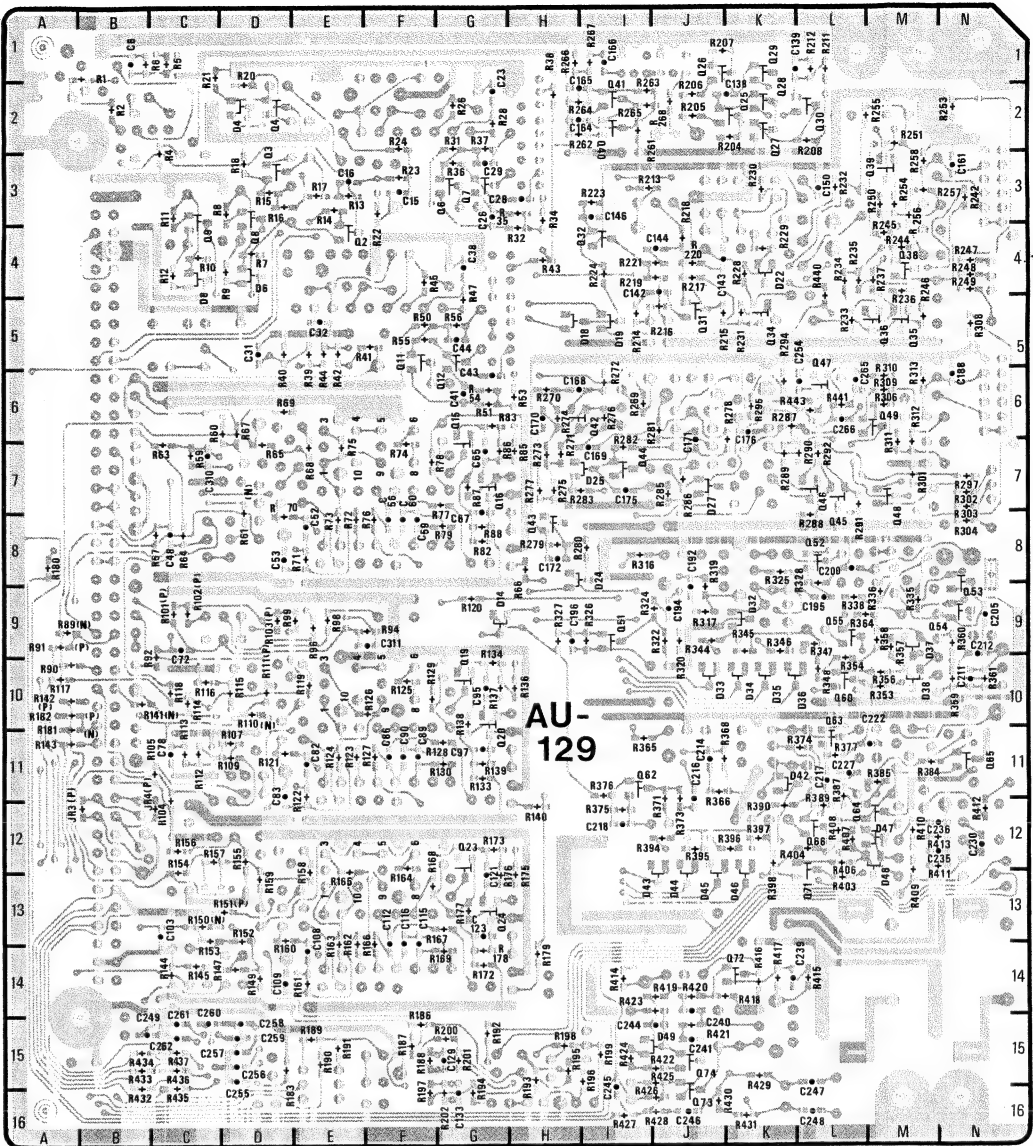
AU-129/129P BOARD

Serial No. 10501 - 10800 (UC)
30401 - 30600 (J)
40501 - 40900 (AE)



1-632-998-12 COMPONENT SIDE

C-100 (b)



1-632-998-12 SOLDERING SIDE

C-101 (b)

AU-129/12

- CF1
- CF2
- CF3
- CF4
- CF5
- CF6
- CF7
- CF8
- CF9
- CF10
- CF11

- CN1
- CP1

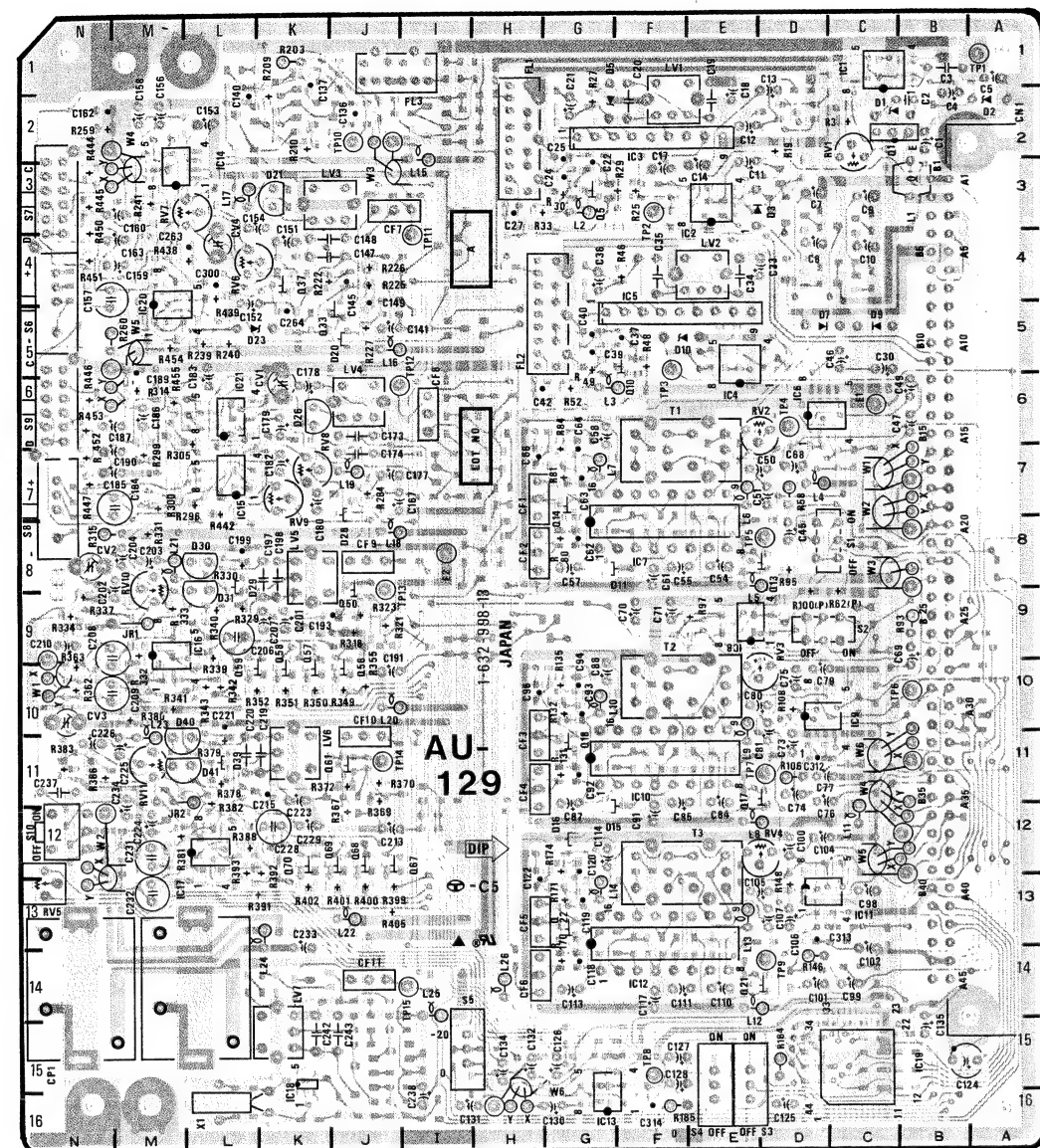
- D1
- D2
- D3
- D4
- D5
- D6
- D7
- D8
- D9
- D10
- D11
- D14
- D15
- D16
- D18
- D19
- D20
- D21
- D22
- D23
- D24
- D25
- D26
- D27
- D28
- D29
- D30
- D31
- D32
- D33
- D34
- D35
- D36
- D37
- D38
- D39
- D40
- D41
- D42
- D43
- D44
- D45
- D46
- D47
- D48
- D49

- E1
- E2

- FL1
- FL2
- FL3

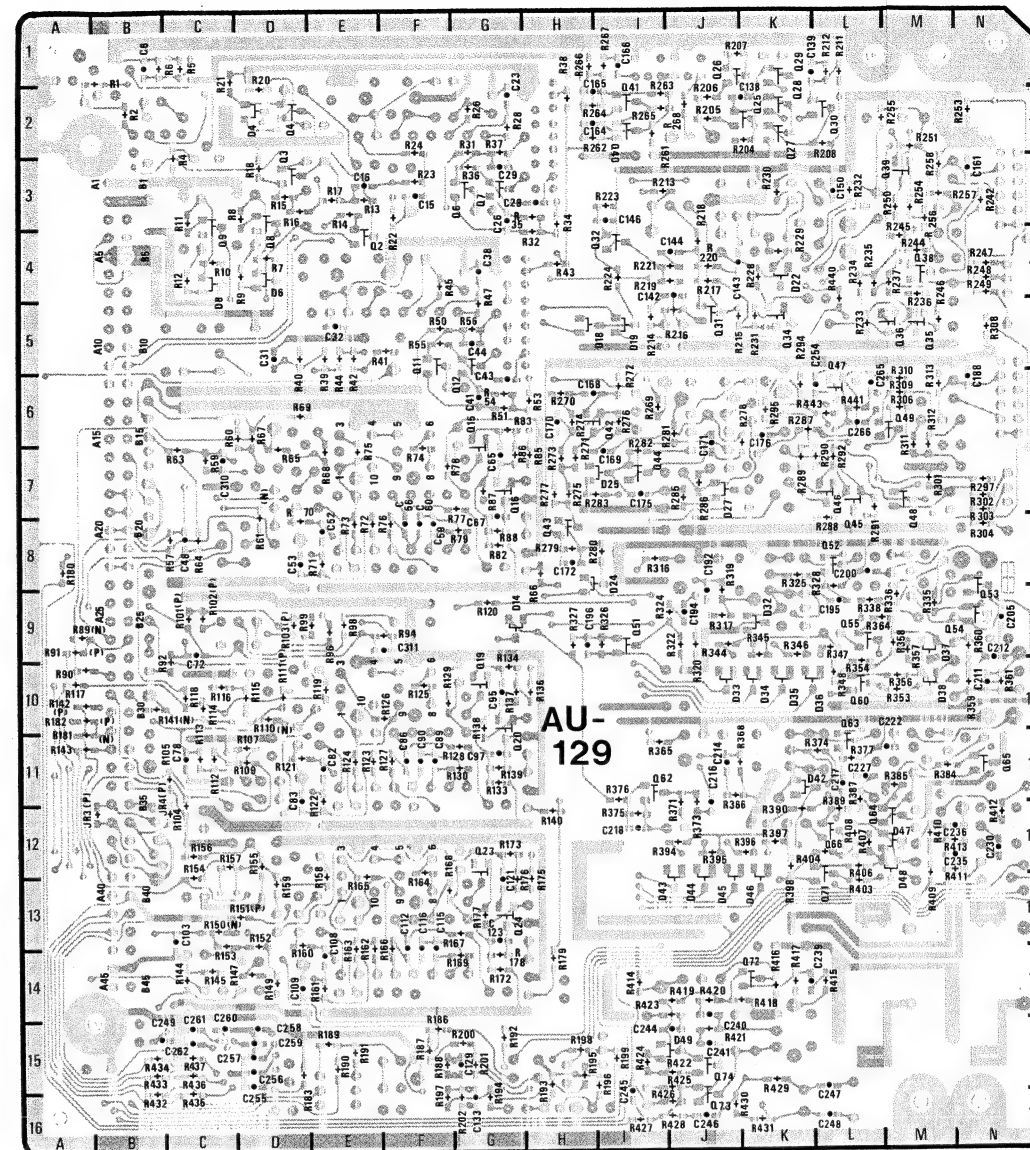
AU-129/129P BOARD

Serial No. 10801 - (UC)
30601 - (J)
40901 - (AE)



1-632-998-13 COMPONENT SIDE

C-100 (c)



1-632-998-13 SOLDERING SIDE

C-101 (c)

AU-129/

CF1
CF2
CF3
CF4
CF5
CF6
CF7
CF8
CF9
CF10
CF11

CN1

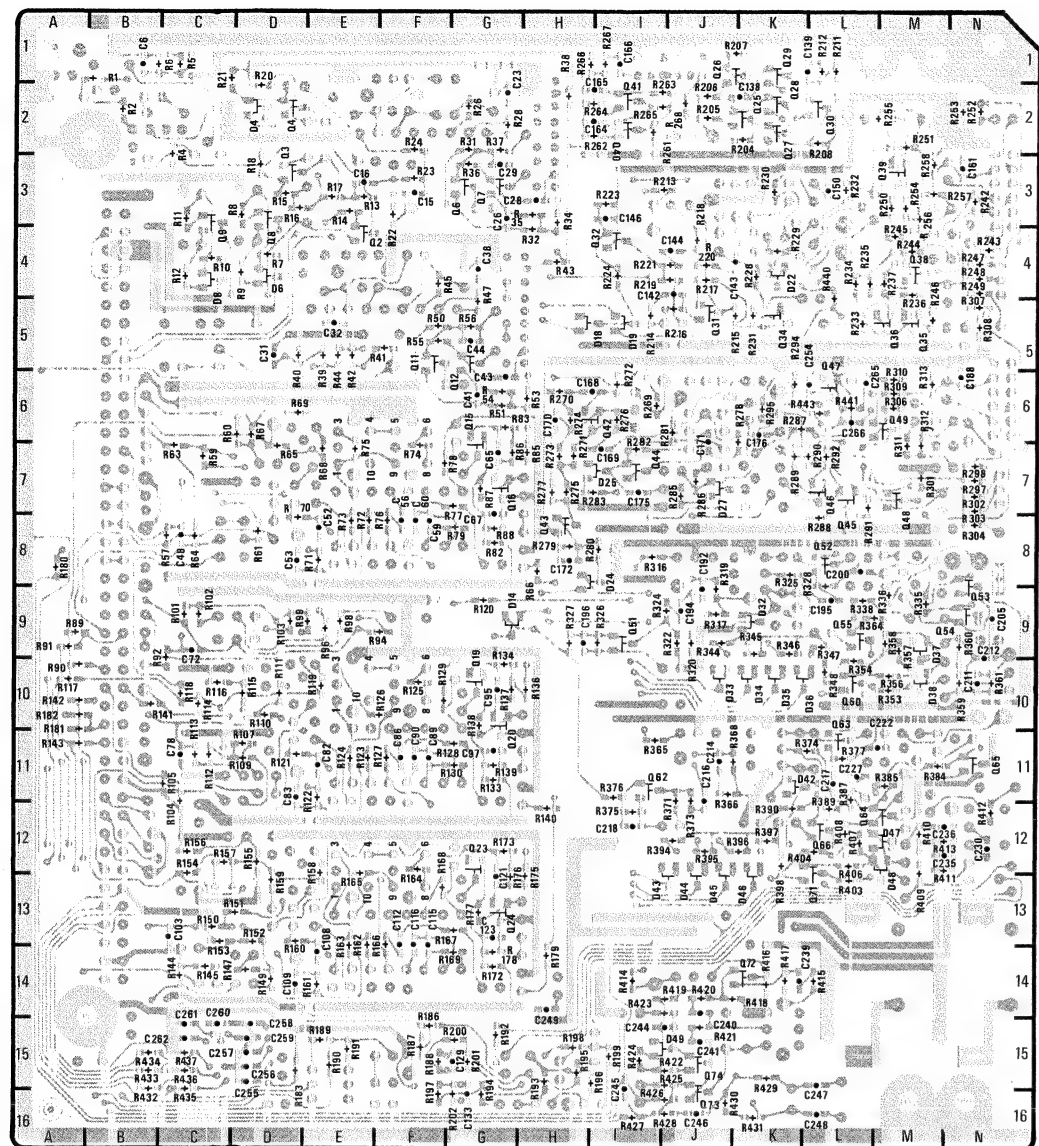
CP1

D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D14
D15
D16
D18
D19
D20
D21
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D35
D36
D37
D38
D39
D40
D41
D42
D43
D44
D45
D46
D47
D48
D49

E1
E2

FL1
FL2
FL3

AU-129/129P 1-632-998-11



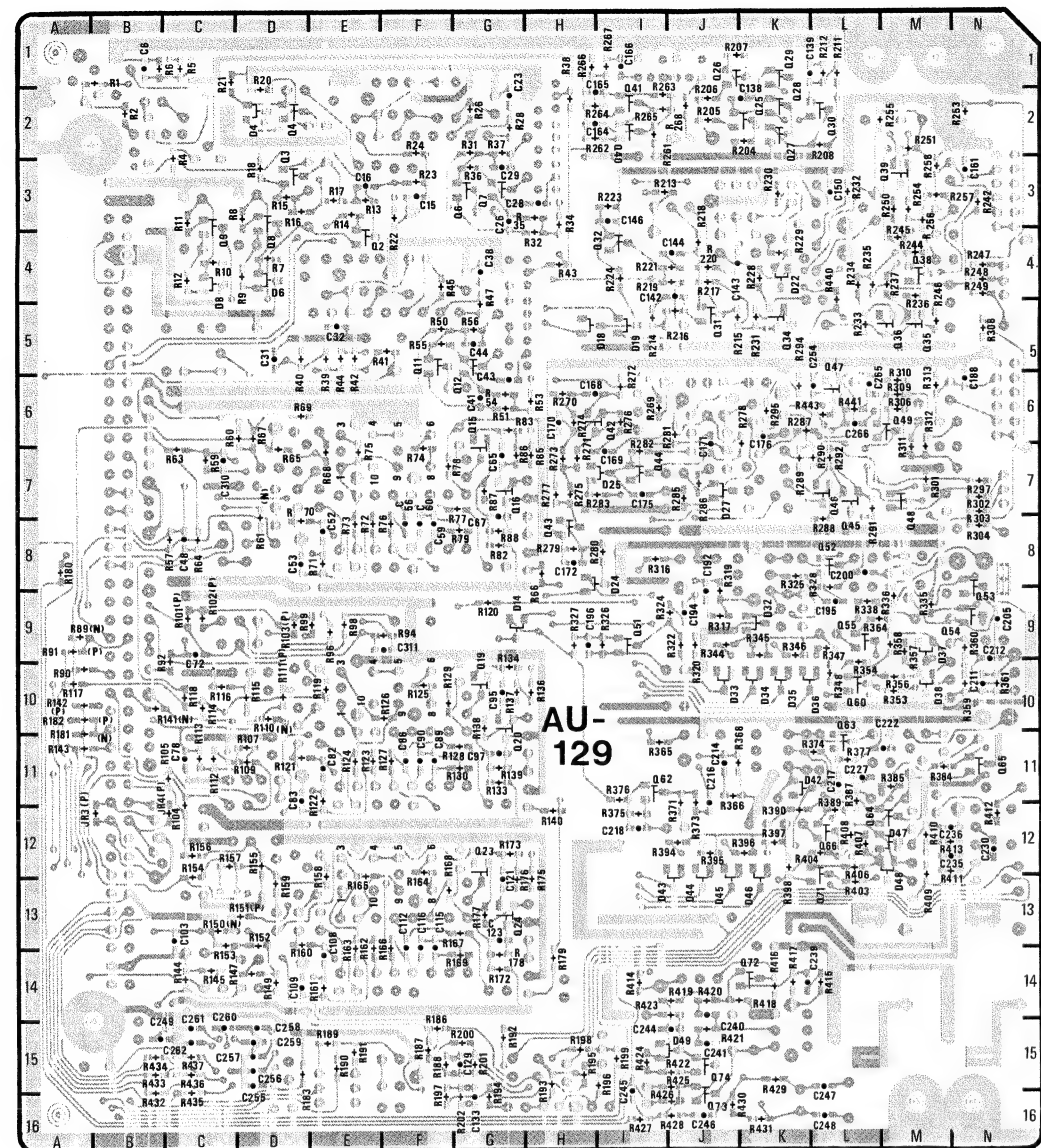
1-632-998-11 SOLDERING SIDE

C-101 (a)

CF1	H-7	IC1	C-1	Q42	I-6	TP15	I-14
CF2	H-8	IC2	F-4	Q44	I-7		
CF3	H-11	IC3	F-2	Q45	L-8	T1	F-6
CF4	H-11	IC4	E-6	Q46	L-7	T2	F-9
CF5	H-13	IC5	F-4	Q47	L-5	T3	E-12
CF6	H-14	IC6	D-6	Q48	M-8		
CF7	J-3	IC7	F-8	Q49	M-6	X1	L-16
CF8	I-6	IC8	E-9	Q50	J-9		
CF9	J-8	IC9	C-10	Q51	I-9		
CF10	J-10	IC10	F-11	Q52	L-8		
CF11	J-13	IC11	C-13	Q53	N-9		
		IC12	F-14	Q54	N-9		
CN1	B-4	IC13	G-16	Q55	L-9		
		IC14	L-2	Q56	J-10		
CP1	N-15	IC15	L-7	Q57	K-9		
		IC16	L-9	Q58	K-9		
D1	C-2	IC17	M-13	Q59	L-10		
D2	A-2	IC18	K-15	Q60	L-10		
D3	D-3	IC19	B-15	Q61	K-11		
D4	D-2	IC20	M-4	Q62	I-11		
D5	G-1	IC21	L-6	Q63	L-10		
D6	D-4			Q64	L-12		
D7	D-5	LV1	F-1	Q65	N-11		
D8	C-4	LV2	E-4	Q66	L-12		
D9	C-5	LV3	J-3	Q67	I-12		
D10	F-5	LV4	J-5	Q68	J-12		
D11	F-8	LV5	K-8	Q69	K-12		
D14	G-9	LV6	K-11	Q70	K-12		
D15	G-12	LV7	K-14	Q71	L-13		
D16	G-12			Q72	K-14		
D18	I-5	Q1	C-2	Q73	J-16		
D19	I-5	Q2	E-4	Q74	J-15		
D20	J-5	Q3	D-3				
D21	K-3	Q4	D-2	RV1	C-2		
D22	K-4	Q5	G-3	RV2	D-6		
D23	L-5	Q6	G-3	RV3	D-9		
D24	I-8	Q7	G-3	RV4	D-12		
D25	I-7	Q8	D-4	RV5	N-13		
D26	K-6	Q9	C-4	RV6	L-4		
D27	J-7	Q10	F-6	RV7	M-3		
D28	J-8	Q11	F-5	RV8	K-6		
D29	L-8	Q12	G-6	RV9	K-8		
D30	L-8	Q13	D-8	RV10	M-8		
D31	L-9	Q14	G-8	RV11	M-11		
D32	K-9	Q15	G-6				
D33	J-10	Q16	G-7	S1	C-8		
D34	K-10	Q17	E-11	S2	C-9		
D35	K-10	Q18	G-11	S3	E-16		
D36	L-10	Q19	G-10	S4	E-16		
D37	M-9	Q20	G-11	S5	I-14		
D38	M-10	Q21	E-14	S6	N-5		
D39	L-11	Q22	G-13	S7	N-3		
D40	L-10	Q23	G-12	S8	N-8		
D41	L-11	Q24	G-13	S9	N-6		
D42	K-11	Q25	K-2	S10	N-12		
D43	I-13	Q26	J-1				
D44	J-13	Q27	K-2	TP1	A-1		
D45	J-13	Q28	K-2	TP2	F-3		
D46	K-13	Q29	K-1	TP3	F-6		
D47	M-12	Q30	L-2	TP4	D-6		
D48	M-13	Q31	J-5	TP5	E-8		
D49	J-15	Q33	K-5	TP6	C-10		
		Q34	K-5	TP7	E-11		
E1	C-6	Q35	M-5	TP8	F-16		
E2	I-8	Q36	M-5	TP9	D-14		
		Q37	K-4	TP10	J-2		
FL1	H-1	Q38	M-4	TP11	I-4		
FL2	H-5	Q39	M-3	TP12	I-5		
FL3	I-2	Q40	I-2	TP13	J-9		
		Q41	I-2	TP14	J-11		

C-102 (a)

BVP-370/P



1-632-998-12 SOLDERING SIDE

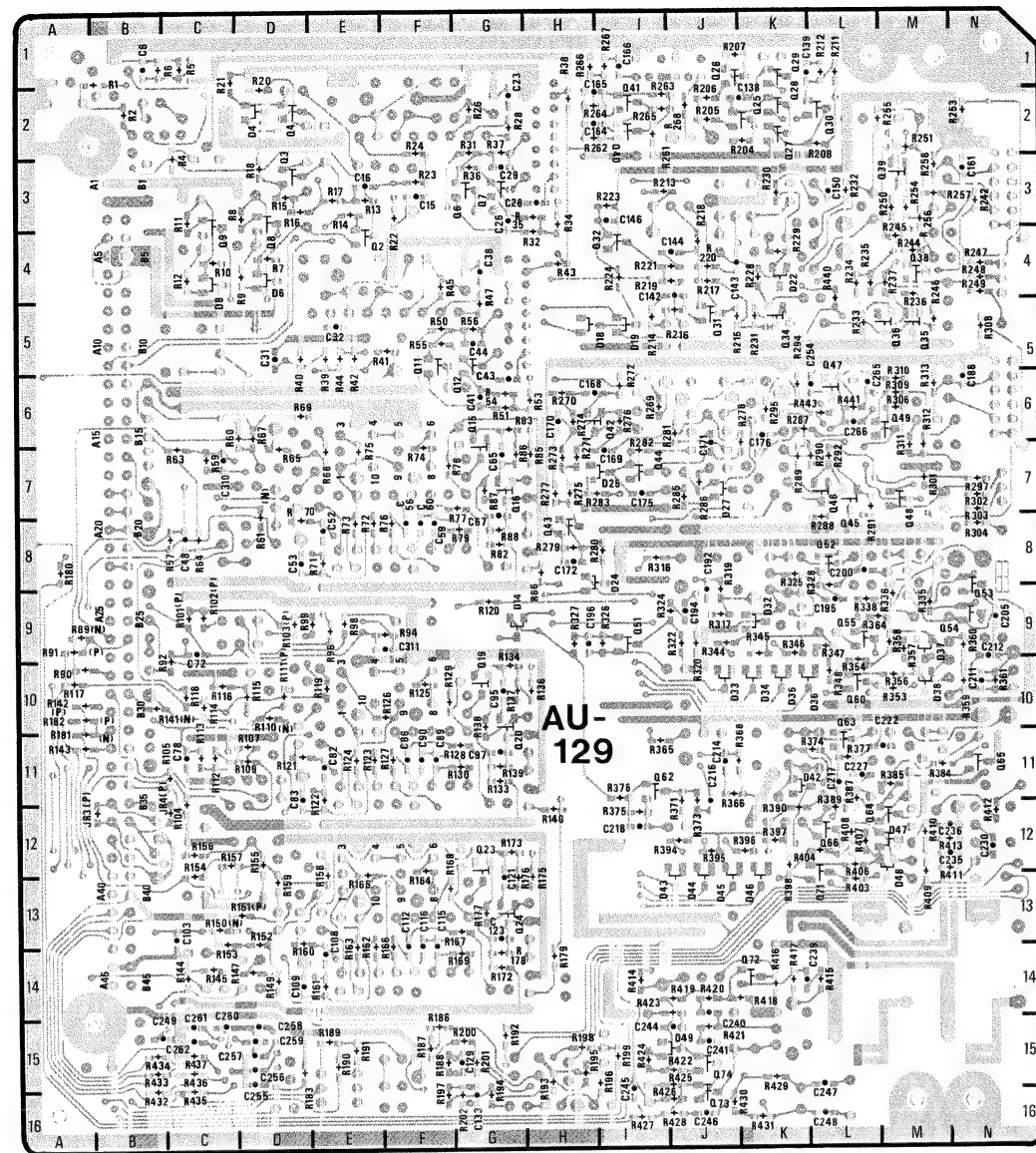
C-101 (b)

AU-129/129P 1-632-998-12

CF1	H-7	IC1	C-1	Q42	I-6	TP15	I-14
CF2	H-8	IC2	F-4	Q44	I-7		
CF3	H-11	IC3	F-2	Q45	L-8	T1	F-6
CF4	H-11	IC4	E-6	Q46	L-7	T2	F-9
CF5	H-13	IC5	F-4	Q47	L-5	T3	E-12
CF6	H-14	IC6	D-6	Q48	M-8		
CF7	J-3	IC7	F-8	Q49	M-6	X1	L-16
CF8	I-6	IC8	E-9	Q50	J-9		
CF9	J-8	IC9	C-10	Q51	I-9		
CF10	J-10	IC10	F-11	Q52	L-8		
CF11	J-13	IC11	C-13	Q53	N-9		
		IC12	F-14	Q54	N-9		
CN1	B-4	IC13	G-16	Q55	L-9		
		IC14	L-2	Q56	J-10		
CP1	N-15	IC15	L-7	Q57	K-9		
		IC16	L-9	Q58	K-9		
D1	C-2	IC17	M-13	Q59	L-10		
D2	A-2	IC18	K-15	Q60	L-10		
D3	D-3	IC19	B-15	Q61	K-11		
D4	D-2	IC20	M-4	Q62	I-11		
D5	G-1	IC21	L-6	Q63	L-10		
D6	D-4			Q64	L-12		
D7	D-5	LV1	F-1	Q65	N-11		
D8	C-4	LV2	E-4	Q66	L-12		
D9	C-5	LV3	J-3	Q67	I-12		
D10	F-5	LV4	J-5	Q68	J-12		
D11	F-8	LV5	K-8	Q69	K-12		
D14	G-9	LV6	K-11	Q70	K-12		
D15	G-12	LV7	K-14	Q71	L-13		
D16	G-12			Q72	K-14		
D18	I-5	Q1	C-2	Q73	J-16		
D19	I-5	Q2	E-4	Q74	J-15		
D20	J-5	Q3	D-3				
D21	K-3	Q4	D-2	RV1	C-2		
D22	K-4	Q5	G-3	RV2	D-6		
D23	L-5	Q6	G-3	RV3	D-9		
D24	I-8	Q7	G-3	RV4	D-12		
D25	I-7	Q8	D-4	RV5	N-13		
D26	K-6	Q9	C-4	RV6	L-4		
D27	J-7	Q10	F-6	RV7	M-3		
D28	J-8	Q11	F-5	RV8	K-6		
D29	L-8	Q12	G-6	RV9	K-8		
D30	L-8	Q13	D-8	RV10	M-8		
D31	L-9	Q14	G-8	RV11	M-11		
D32	K-9	Q15	G-6				
D33	J-10	Q16	G-7	S1	C-8		
D34	K-10	Q17	E-11	S2	C-9		
D35	K-10	Q18	G-11	S3	E-16		
D36	L-10	Q19	G-10	S4	E-16		
D37	M-9	Q20	G-11	S5	I-14		
D38	M-10	Q21	E-14	S6	N-5		
D39	L-11	Q22	G-13	S7	N-3		
D40	L-10	Q23	G-12	S8	N-8		
D41	L-11	Q24	G-13	S9	N-6		
D42	K-11	Q25	K-2	S10	N-12		
D43	I-13	Q26	J-1				
D44	J-13	Q27	K-2	TP1	A-1		
D45	J-13	Q28	K-2	TP2	F-3		
D46	K-13	Q29	K-1	TP3	F-6		
D47	M-12	Q30	L-2	TP4	D-6		
D48	M-13	Q31	J-5	TP5	E-8		
D49	J-15	Q33	K-5	TP6	C-10		
		Q34	K-5	TP7	E-11		
E1	C-6	Q35	M-5	TP8	F-15		
E2	I-8	Q36	M-5	TP9	D-14		
		Q37	K-4	TP10	J-2		
FL1	H-1	Q38	M-4	TP11	I-4		
FL2	H-5	Q39	M-3	TP12	I-5		
FL3	I-2	Q40	I-2	TP13	J-9		
		Q41	I-2	TP14	J-11		

C-102 (b)

BVP-370/P

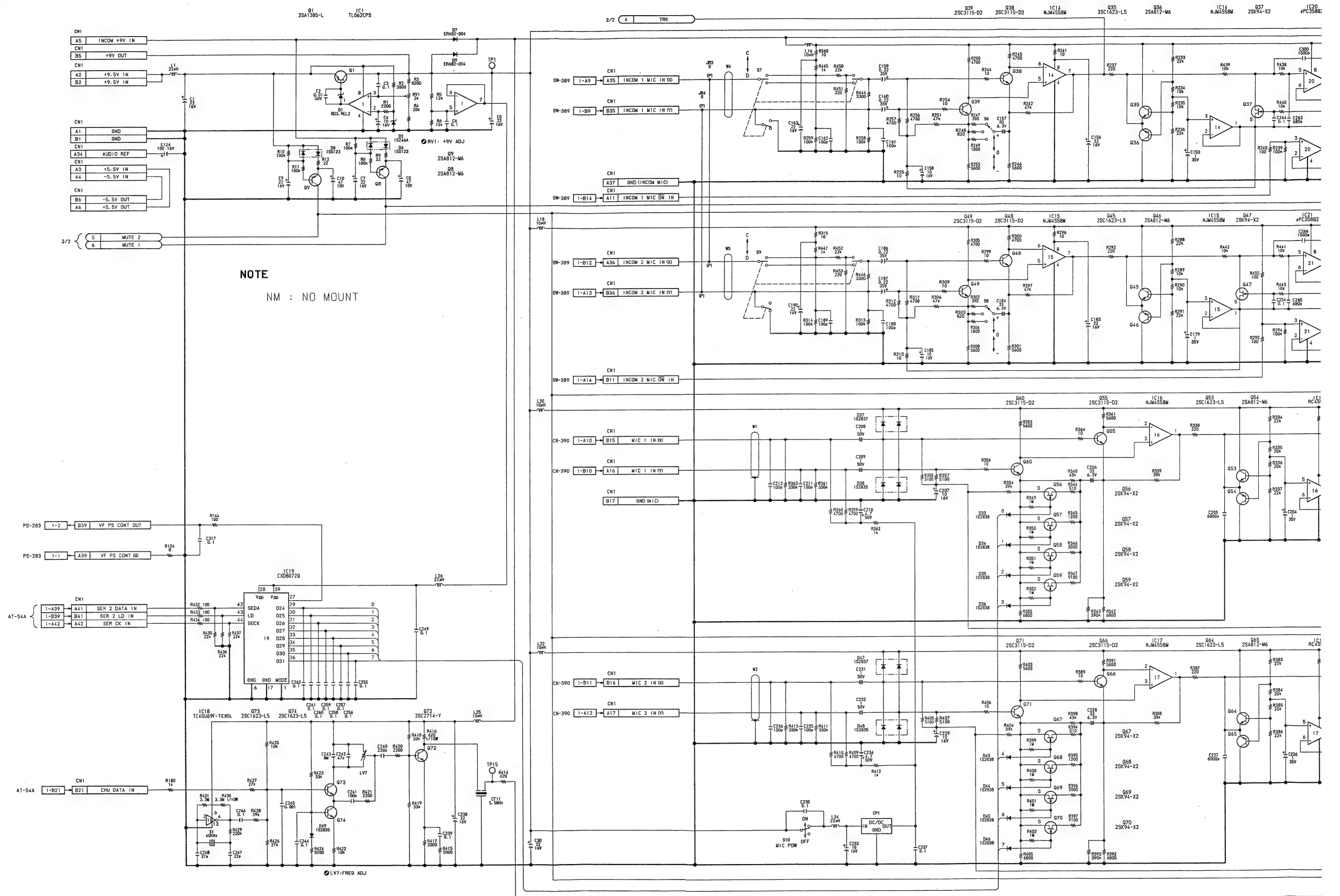


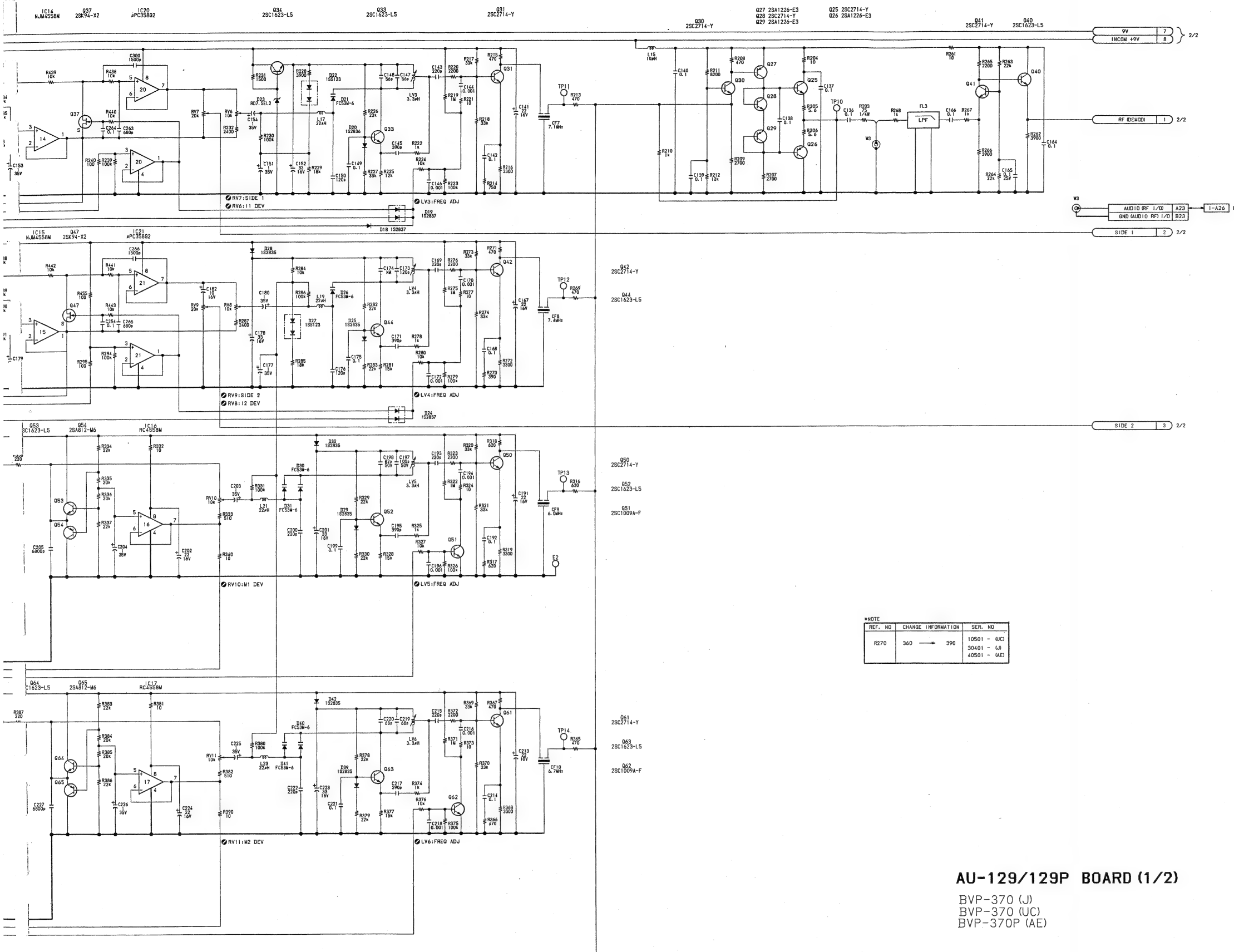
1-632-998-13 SOLDERING SIDE

AU-129/129P 1-632-998-13

CF1	H-7	IC1	C-1	Q41	I-2	TP13	I-9
CF2	H-8	IC2	E-4	Q42	J-6	TP14	J-11
CF3	H-11	IC3	F-2	Q44	J-7	TP15	I-14
CF4	H-11	IC4	E-6	Q45	L-8		
CF5	H-13	IC5	F-4	Q46	L-7	T1	F-6
CF6	H-14	IC6	D-6	Q47	L-5	T2	F-9
CF7	J-3	IC7	F-8	Q48	M-8	T3	E-12
CF8	I-6	IC8	E-9	Q49	M-6		
CF9	J-8	IC9	C-10	Q50	J-9	X1	L-16
CF10	J-10	IC10	F-11	Q51	I-9		
CF11	J-14	IC11	C-13	Q52	L-8		
		IC12	F-14	Q53	N-9		
CN1	B-4	IC13	G-16	Q54	N-9		
		IC14	L-2	Q55	L-9		
CP1	N-15	IC15	L-7	Q56	J-10		
		IC16	L-9	Q57	K-9		
D1	C-2	IC17	M-13	Q58	K-9		
D2	A-2	IC18	K-16	Q59	L-10		
D3	D-3	IC19	B-15	Q60	L-10		
D4	D-2	IC20	M-5	Q61	K-11		
D5	G-1	IC21	L-6	Q62	I-11		
D6	D-4			Q63	L-10		
D7	C-5	LV1	F-1	Q64	L-12		
D8	C-4	LV2	E-4	Q65	N-11		
D9	C-5	LV3	J-3	Q66	L-12		
D10	F-5	LV4	J-5	Q67	I-12		
D11	F-8	LV5	K-8	Q68	J-12		
D14	G-9	LV6	K-11	Q69	J-12		
D15	G-12	LV7	K-14	Q70	K-12		
D16	G-12			Q71	L-13		
D18	J-5	Q1	C-2	Q72	K-14		
D19	J-5	Q2	E-4	Q73	J-16		
D20	J-5	Q3	D-3	Q74	J-15		
D21	K-3	Q4	D-2				
D22	K-4	Q5	G-3	RV1	C-2		
D23	K-5	Q6	G-3	RV2	D-6		
D24	J-8	Q7	G-3	RV3	D-9		
D25	J-7	Q8	D-4	RV4	D-12		
D26	K-6	Q9	C-4	RV5	N-13		
D27	J-7	Q10	F-6	RV6	L-4		
D28	J-8	Q11	F-5	RV7	M-3		
D29	L-8	Q12	G-6	RV8	K-6		
D30	L-8	Q13	D-8	RV9	K-8		
D31	L-9	Q14	G-7	RV10	M-8		
D32	K-9	Q15	G-6	RV11	M-11		
D33	J-10	Q16	G-7				
D34	K-10	Q17	E-11	S1	C-8		
D35	K-10	Q18	G-10	S2	C-9		
D36	L-10	Q19	G-9	S3	D-16		
D37	M-9	Q20	G-11	S4	E-16		
D38	M-10	Q21	E-14	S5	I-14		
D39	L-11	Q22	G-13	S6	N-5		
D40	L-10	Q23	G-12	S7	N-3		
D41	L-11	Q24	G-13	S8	N-8		
D42	K-11	Q25	K-2	S9	N-6		
D43	I-13	Q26	J-1	S10	N-12		
D44	J-13	Q27	K-2				
D45	J-13	Q28	K-2	TP1	A-1		
D46	K-13	Q29	K-1	TP2	F-4		
D47	M-12	Q30	L-2	TP3	F-6		
D48	M-13	Q31	J-5	TP4	D-6		
D49	J-15	Q33	K-5	TP5	E-8		
		Q34	K-5	TP6	B-10		
E1	B-6	Q35	M-5	TP7	E-11		
E2	I-8	Q36	M-5	TP8	F-15		
		Q37	K-4	TP9	D-14		
FL1	H-1	Q38	M-4	TP10	J-2		
FL2	H-5	Q39	M-3	TP11	I-4		
FL3	I-2	Q40	I-2	TP12	I-5		

AU-129/129P (1/2) BOARD

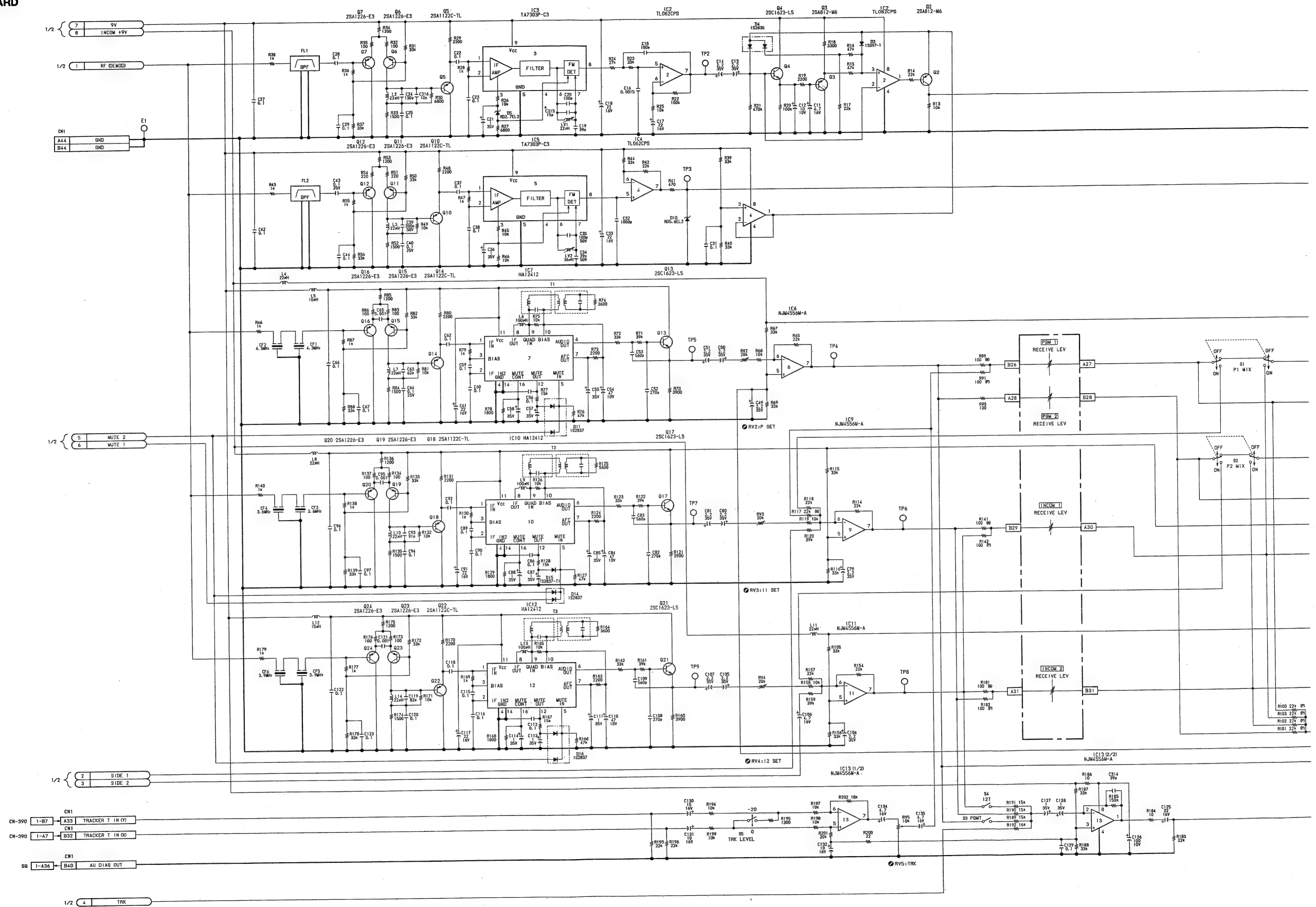




C-105

C-106

B-BVP370-AU129M#1

AU-129/129P (2/2) BOARD

BVP-370/P

C-111

C-112

A

B

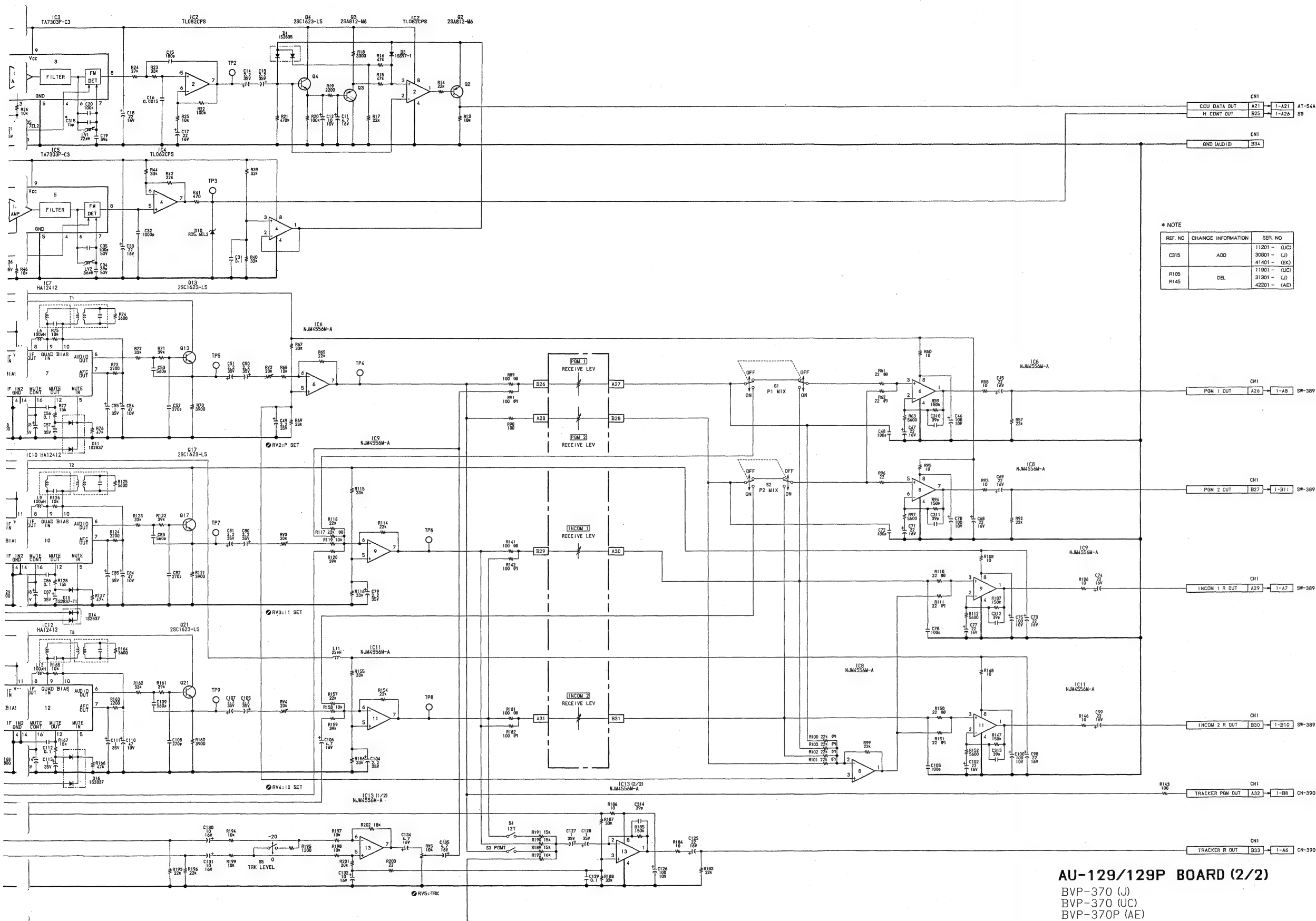
C

D

1

1

1



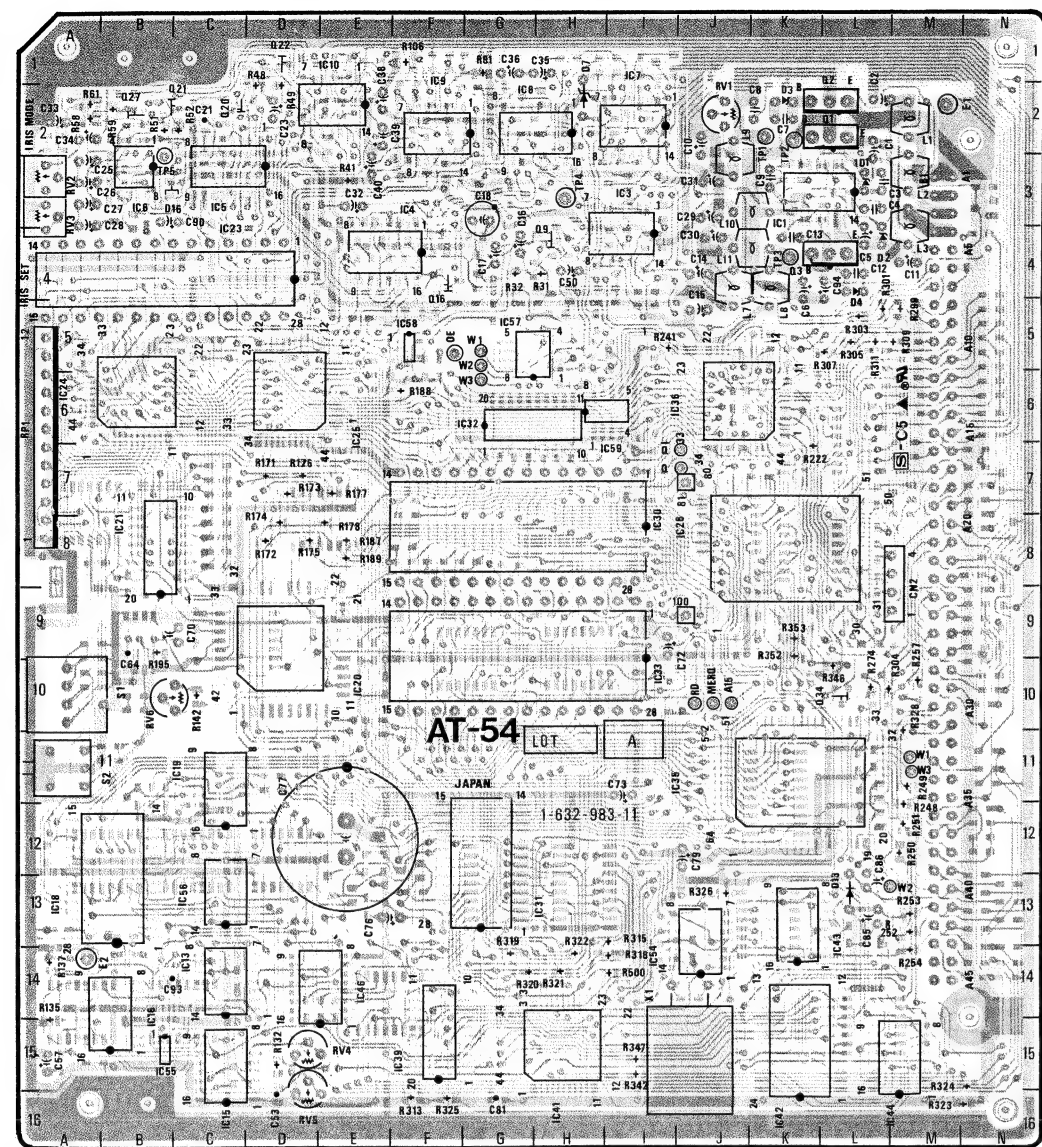
C-112

C-113

B-BVP370-AU129M#2

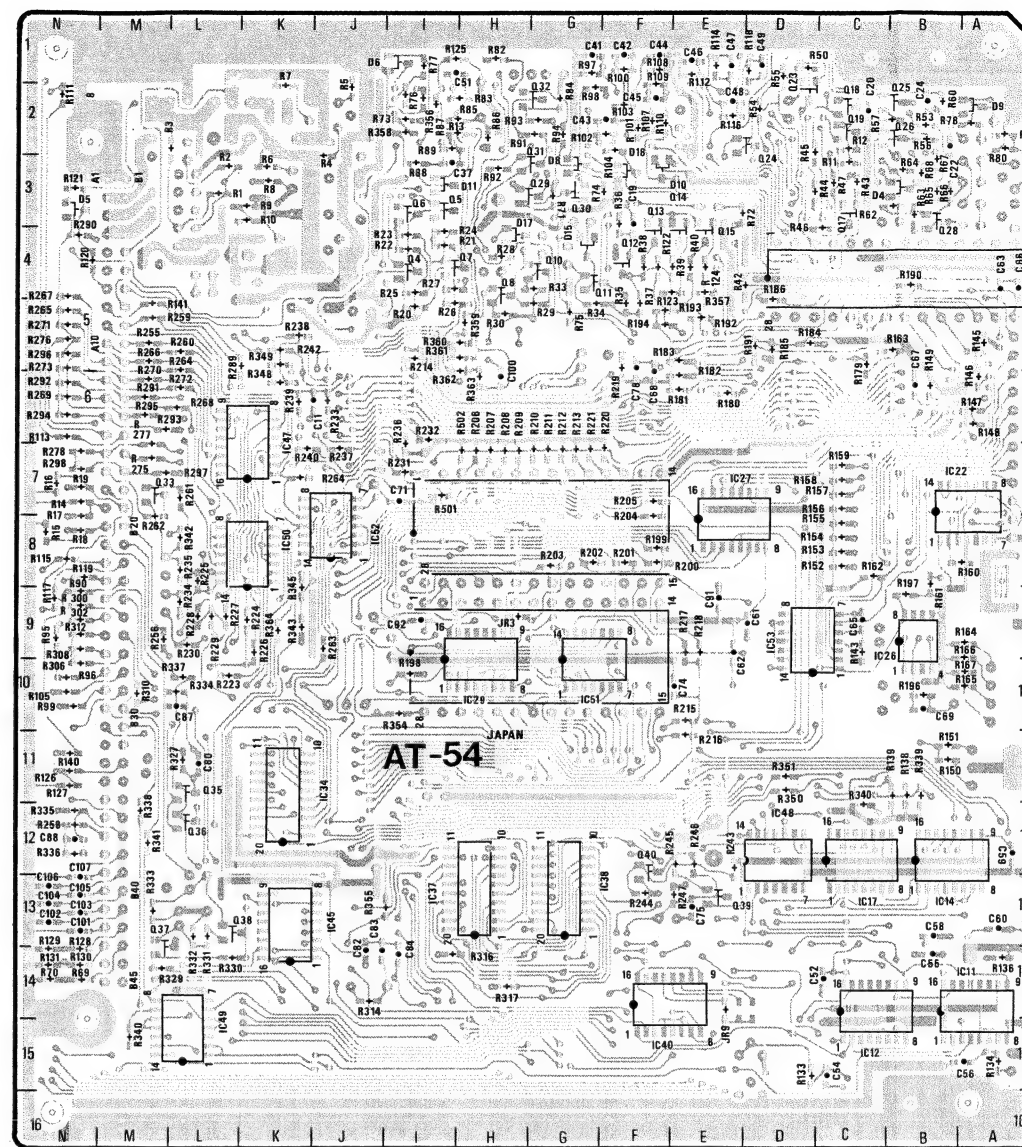
AT-54 BOARD

Serial No. 10301 - 10500 (UC)
30301 - 30400 (J)
40301 - 40600 (AE)



1-632-983-11 COMPONENT SIDE

C-114 (a)



1-632-983-11 SOLDERING SIDE

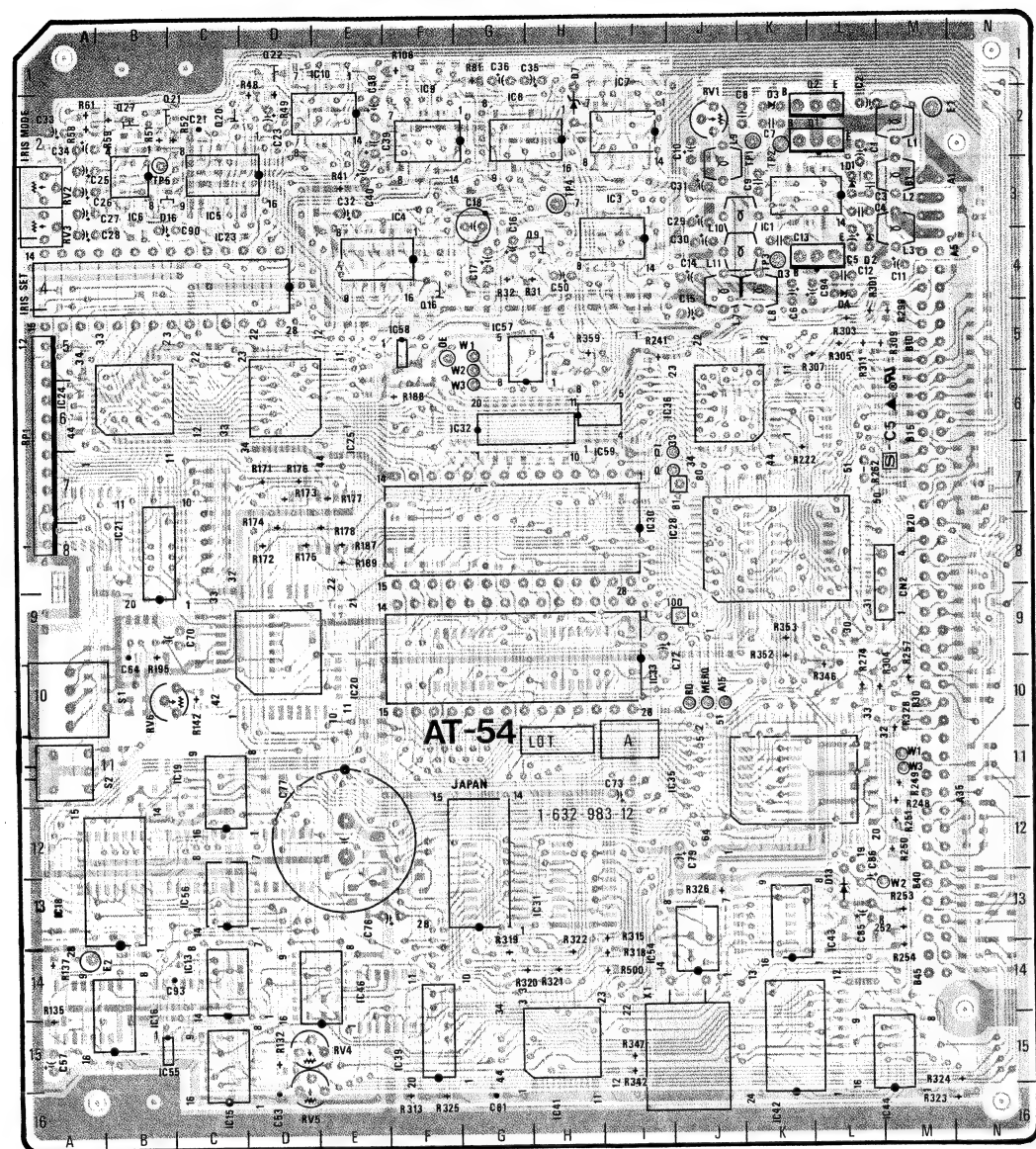
C-115 (a)

AT-54 1-

CN130
CN133CN1
CN2D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D13
D14
D15
D16
D17
D18E1
E2IC1
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC14
IC15
IC16
IC17
IC18
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IC43
IC44

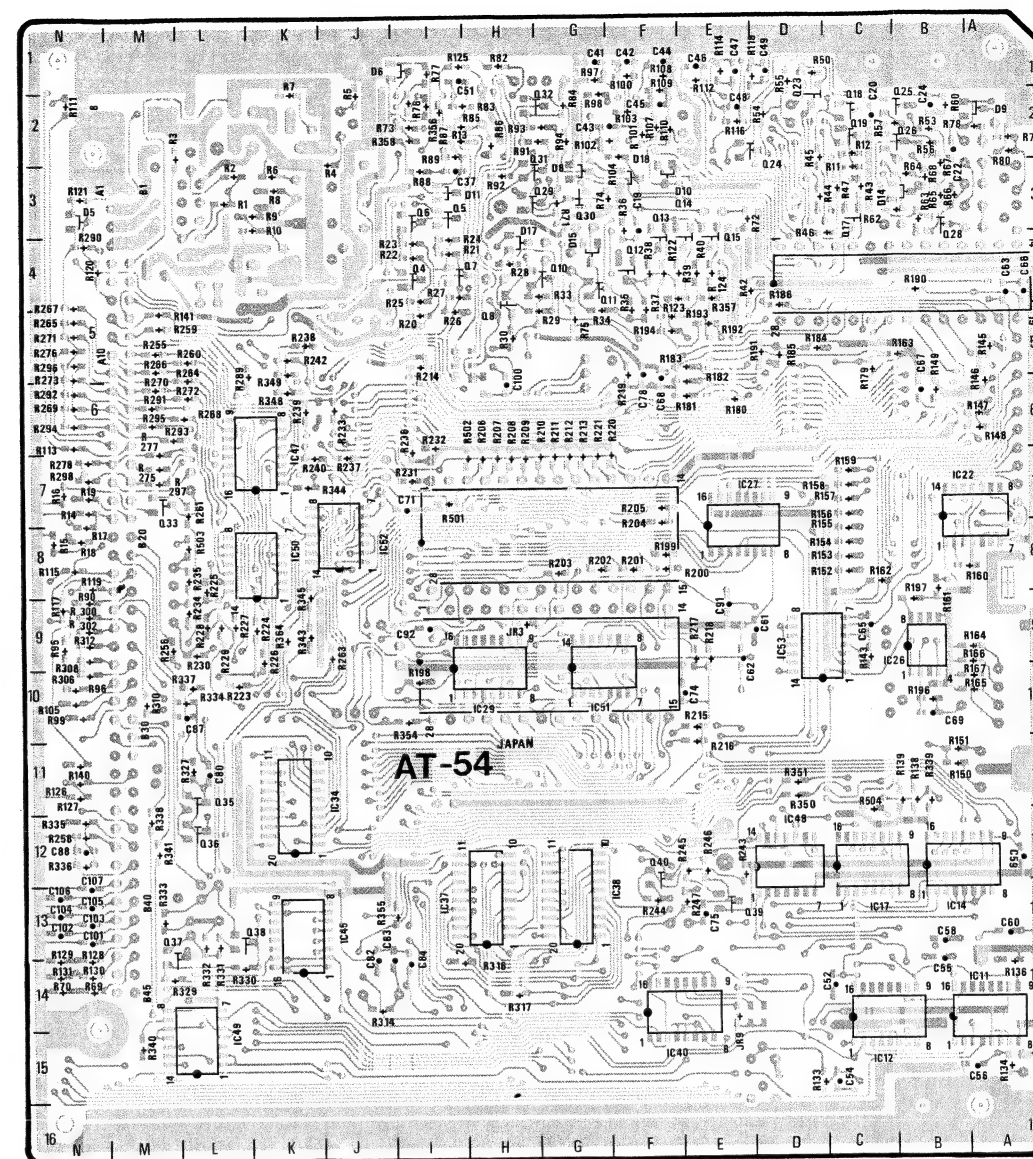
AT-54 BOARD

Serial No. 10301 - 10800 (UC)
30301 - 30600 (J)
40301 - 40900 (AE)



1-632-983-12 COMPONENT SIDE

C-114 (b)



1-632-983-12 SOLDERING SIDE

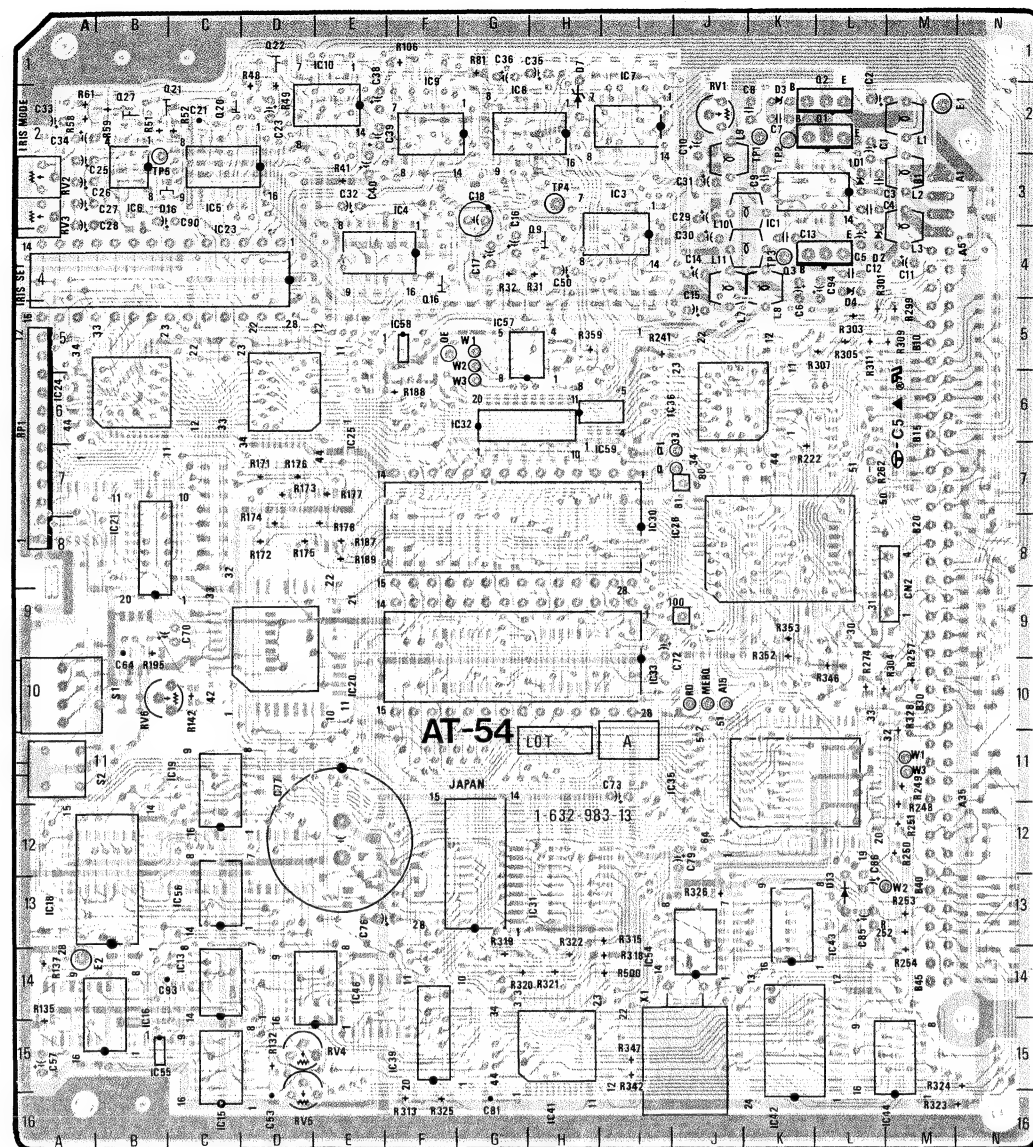
C-115 (b)

AT-54 1-

CNI30
CNI33CN1
CN2D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D13
D14
D15
D16
D17
D18E1
E2IC1
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC14
IC15
IC16
IC17
IC18
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IC42
IC43
IC44

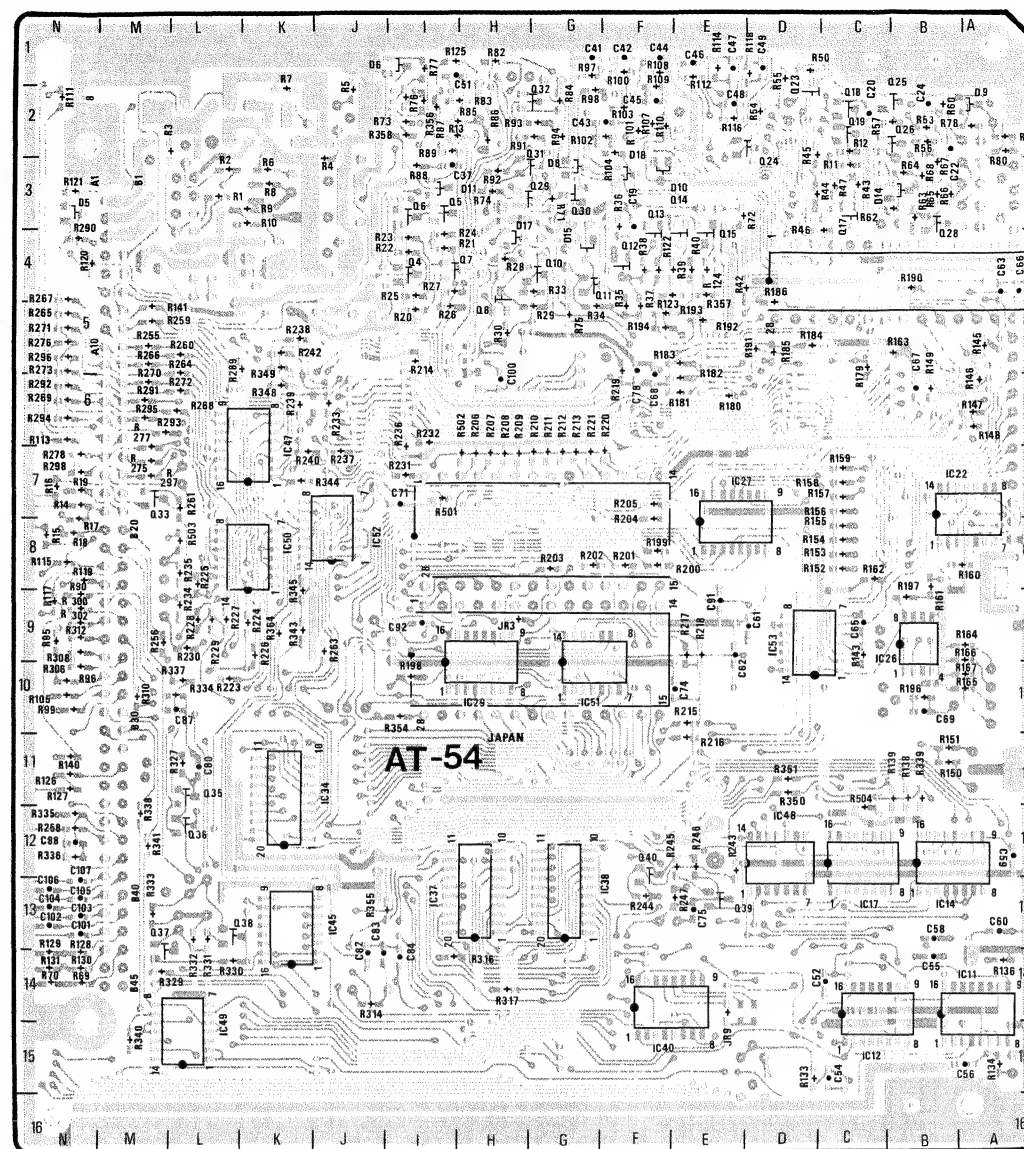
AT-54 BOARD

Serial No. 10801 - (UC)
30601 - (J)
40901 - (AE)



1-632-983-13 COMPONENT SIDE

C-114 (c)



1-632-983-13 SOLDERING SIDE

C-115 (c)

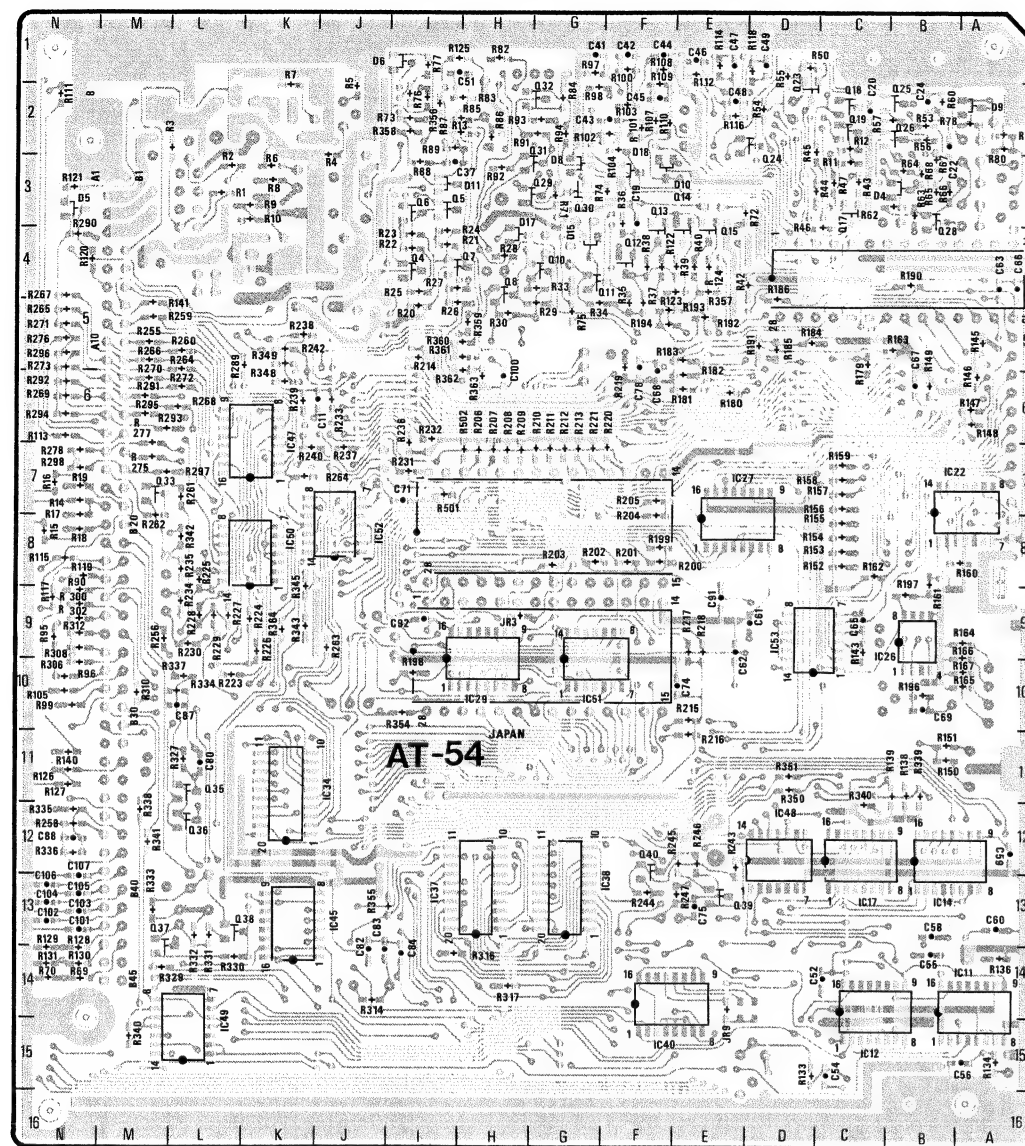
AT-54 1-

CN130
CN133CN1
CN2

D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D13
D14
D15
D16
D17
D18

E1
E2

IC1
IC3
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IC40
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IC42
IC43
IC44



1-632-983-11 SOLDERING SIDE

C-115 (a)

AT-54 1-632-983-11

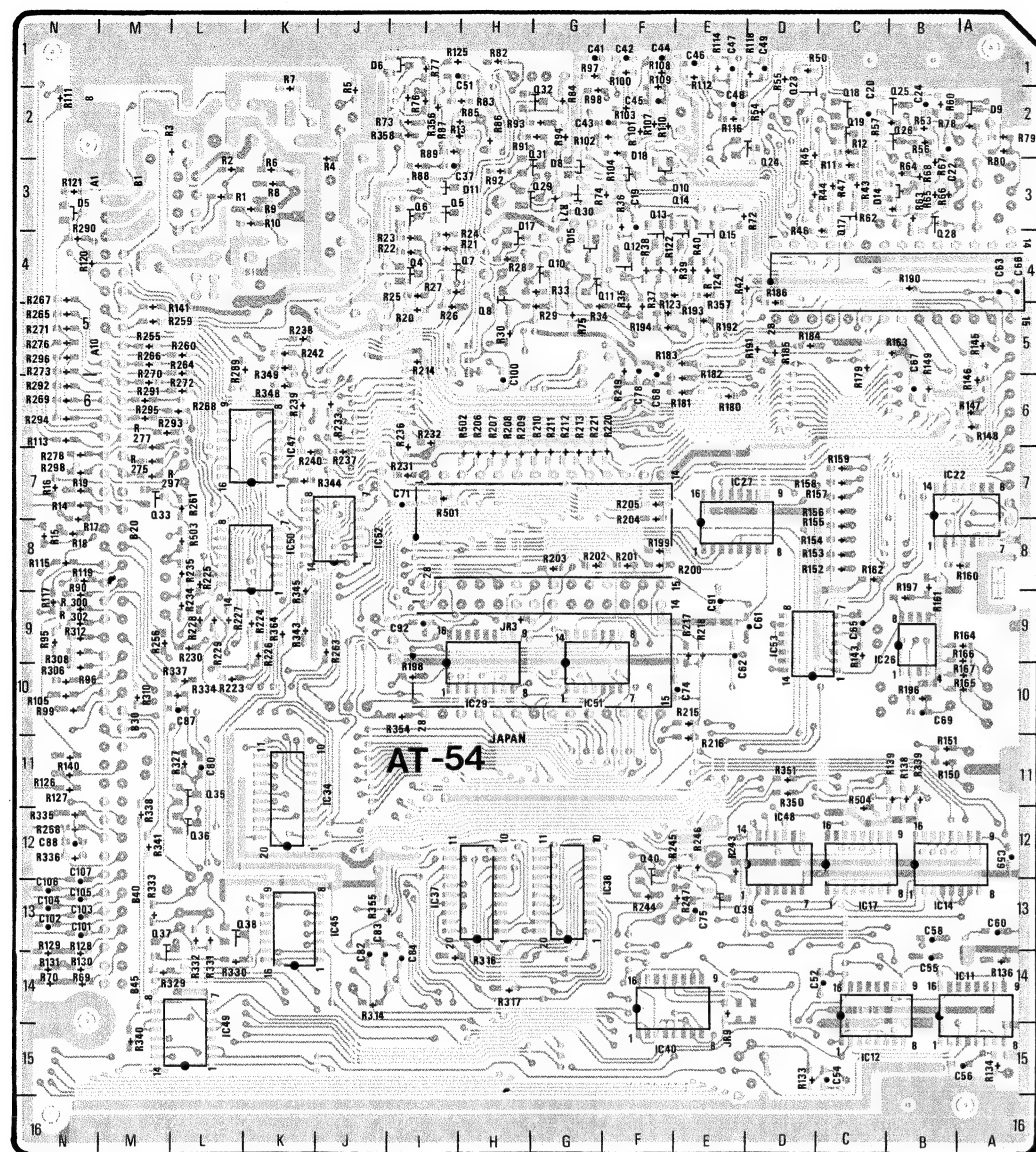
CNI30	I-8	IC45	J-13	TP3	K-4
CNI33	I-10	IC46	E-14	TP4	H-3
		IC47	K-6	TP5	B-3
CN1	M-7	IC48	D-12		
CN2	M-9	IC49	L-15	X1	I-14
		IC50	K-8		
D1	L-3	IC51	G-10		
D2	L-4	IC52	J-8		
D3	K-2	IC53	D-9		
D4	L-5	IC54	I-14		
D5	N-3	IC55	B-15		
D6	J-1	IC56	C-13		
D7	H-1	IC57	G-5		
D8	G-3	IC58	F-5		
D9	A-2	IC59	I-7		
D10	E-3				
D11	H-3	Q1	L-2		
D13	L-13	Q2	L-1		
D14	C-3	Q3	K-4		
D15	G-4	Q4	I-4		
D16	B-3	Q5	I-3		
D17	H-3	Q6	I-3		
D18	F-2	Q7	H-4		
		Q8	H-4		
E1	N-2	Q9	H-4		
E2	B-14	Q10	G-4		
		Q11	F-4		
IC1	K-3	Q12	F-4		
IC3	I-3	Q13	F-3		
IC4	F-3	Q14	E-3		
IC5	C-3	Q15	E-4		
IC6	B-3	Q16	F-5		
IC7	I-1	Q17	C-3		
IC8	G-2	Q18	C-2		
IC9	F-2	Q19	C-2		
IC10	E-1	Q20	C-2		
IC11	A-14	Q21	C-2		
IC12	C-15	Q22	D-1		
IC13	C-14	Q23	D-1		
IC14	B-13	Q24	D-3		
IC15	C-16	Q25	B-2		
IC16	B-14	Q26	B-2		
IC17	C-13	Q27	B-2		
IC18	A-13	Q28	B-4		
IC19	C-11	Q29	G-3		
IC20	E-10	Q30	G-3		
IC21	B-8	Q31	G-2		
IC22	B-7	Q32	G-2		
IC23	C-3	Q33	M-7		
IC24	A-6	Q35	L-11		
IC25	E-6	Q36	L-12		
IC26	B-10	Q37	M-13		
IC27	E-7	Q38	K-13		
IC28	J-8	Q39	E-13		
IC29	H-10	Q40	F-12		
IC30	I-8				
IC31	H-13	RP1	A-6		
IC32	G-6				
IC33	I-10	RV1	J-2		
IC34	K-11	RV2	A-3		
IC35	J-11	RV3	A-3		
IC36	I-6	RV4	E-15		
IC37	I-13	RV5	D-16		
IC38	F-13	RV6	B-10		
IC39	F-15				
IC40	F-15	S1	B-10		
IC41	H-16	S2	B-11		
IC42	K-16				
IC43	L-13	TP1	K-2		
IC44	M-16	TP2	K-2		

C-116 (a)

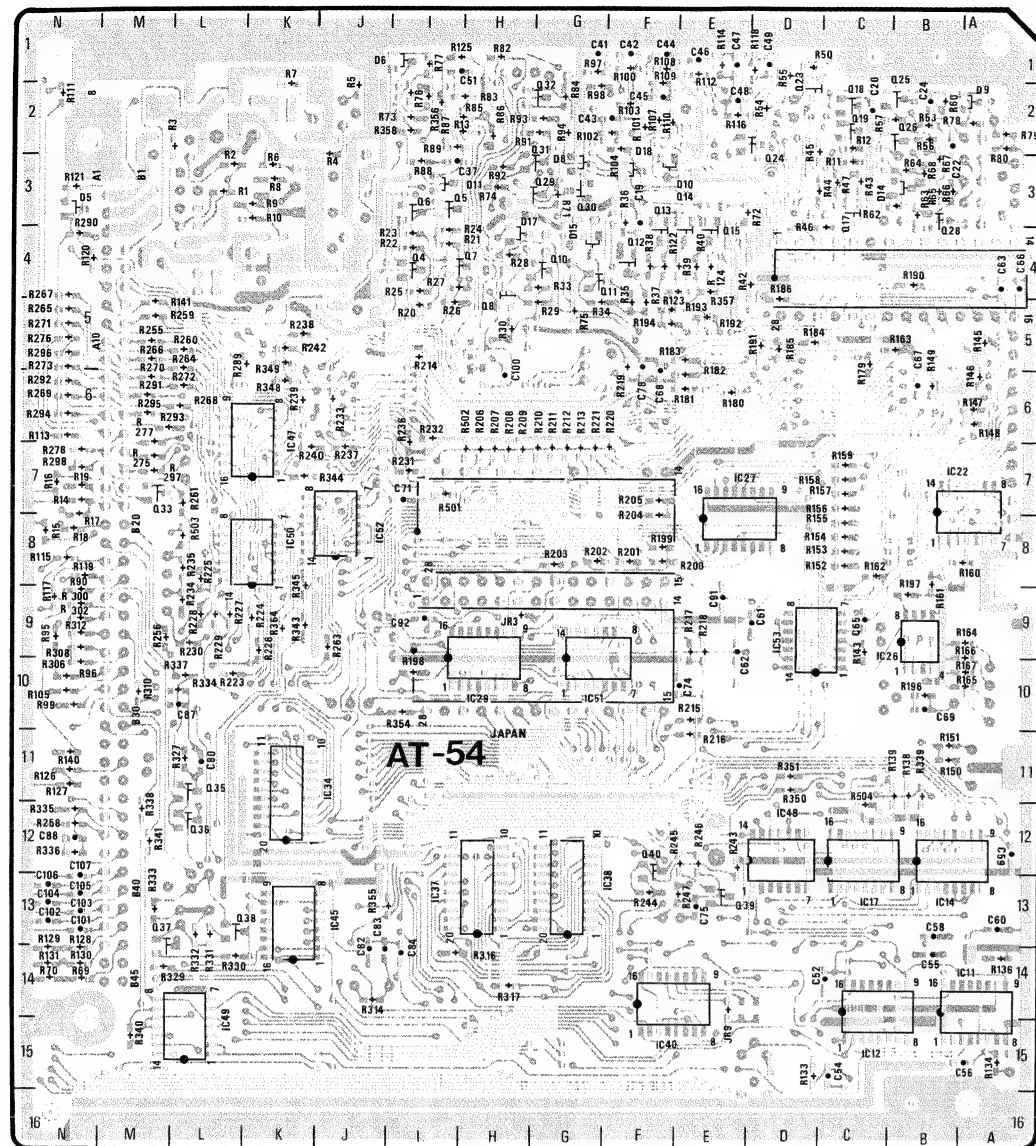
BVP-370/P

AT-54 1-632-983-12

CNI30	I-8	IC45	J-13	TP3	K-4
CNI33	I-10	IC46	E-14	TP4	H-3
		IC47	K-7	TP5	B-3
CN1	B-10	IC48	D-12		
CN2	M-9	IC49	L-15	X1	I-14
		IC50	K-8		
D1	L-3	IC51	G-10		
D2	L-4	IC52	J-8		
D3	K-2	IC53	D-9		
D4	L-5	IC54	I-14		
D5	N-3	IC55	B-15		
D6	J-1	IC56	C-13		
D7	H-1	IC57	G-5		
D8	G-3	IC58	F-5		
D9	A-2	IC59	I-7		
D10	E-3				
D11	H-3	Q1	L-2		
D13	L-13	Q2	L-2		
D14	C-3	Q3	K-4		
D15	G-4	Q4	I-4		
D16	C-3	Q5	I-3		
D17	H-3	Q6	I-3		
D18	F-2	Q7	H-4		
		Q8	H-5		
E1	N-2	Q9	H-4		
E2	B-14	Q10	G-4		
		Q11	G-4		
IC1	K-3	Q12	F-4		
IC3	I-3	Q13	F-3		
IC4	F-3	Q14	E-3		
IC5	C-3	Q15	E-4		
IC6	B-3	Q16	F-5		
IC7	I-1	Q17	C-3		
IC8	G-2	Q18	C-2		
IC9	F-2	Q19	C-2		
IC10	E-1	Q20	C-2		
IC11	A-14	Q21	C-2		
IC12	C-15	Q22	D-1		
IC13	C-14	Q23	D-1		
IC14	B-13	Q24	D-3		
IC15	C-16	Q25	B-2		
IC16	B-14	Q26	B-2		
IC17	C-13	Q27	B-2		
IC18	A-13	Q28	B-4		
IC19	C-11	Q29	G-3		
IC20	E-10	Q30	G-3		
IC21	B-8	Q31	G-2		
IC22	B-7	Q32	G-2		
IC23	C-4	Q33	M-7		
IC24	A-6	Q35	L-11		
IC25	E-6	Q36	L-12		
IC26	B-9	Q37	M-13		
IC27	E-7	Q38	L-13		
IC28	J-8	Q39	E-13		
IC29	H-10	Q40	F-12		
IC30	I-8				
IC31	H-13	RP1	A-6		
IC32	G-6				
IC33	I-10	RV1	J-2		
IC34	J-11	RV2	A-3		
IC35	I-11	RV3	A-3		
IC36	J-6	RV4	E-15		
IC37	I-13	RV5	D-16		
IC38	F-13	RV6	B-10		
IC39	F-15				
IC40	F-15	S1	B-10		
IC41	H-16	S2	B-11		
IC42	K-16				
IC43	L-13	TP1	K-3		
IC44	L-16	TP2	K-3		



1-632-983-12 SOLDERING SIDE



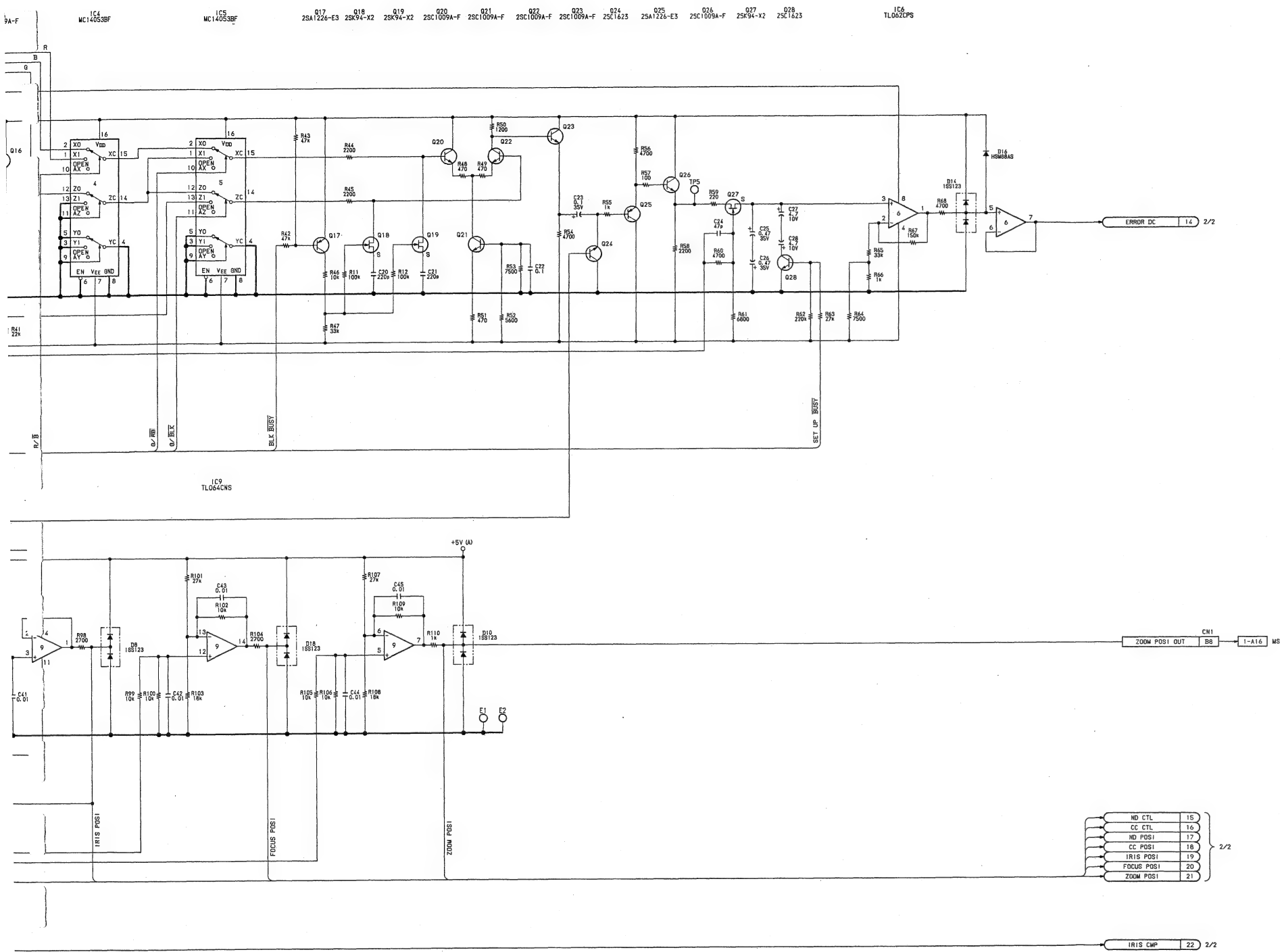
1-632-983-13 SOLDERING SIDE

AT-54 1-632-983-13

CNI30	I-8	IC45	J-13	TP3	K-4
CNI33	I-10	IC46	E-14	TP4	H-3
		IC47	K-7	TP5	B-3
CN1	M-7	IC48	D-12		
CN2	M-9	IC49	L-15	X1	I-14
		IC50	K-8		
D1	L-3	IC51	G-10		
D2	L-4	IC52	J-8		
D3	K-2	IC53	D-9		
D4	L-5	IC54	I-14		
D5	N-3	IC55	B-15		
D6	J-1	IC56	C-13		
D7	H-1	IC57	G-5		
D8	G-3	IC58	F-5		
D9	A-2	IC59	I-7		
D10	E-3				
D11	H-3	Q1	L-2		
D13	L-13	Q2	L-2		
D14	C-3	Q3	K-4		
D15	G-4	Q4	I-4		
D16	C-3	Q5	I-3		
D17	H-3	Q6	I-3		
D18	F-2	Q7	H-4		
		Q8	H-5		
E1	N-2	Q9	H-4		
E2	B-14	Q10	G-4		
		Q11	G-4		
IC1	K-3	Q12	F-4		
IC3	I-3	Q13	F-3		
IC4	F-3	Q14	E-3		
IC5	C-3	Q15	E-4		
IC6	B-3	Q16	F-5		
IC7	I-1	Q17	C-3		
IC8	G-2	Q18	C-2		
IC9	F-2	Q19	C-2		
IC10	E-1	Q20	C-2		
IC11	A-14	Q21	C-2		
IC12	C-15	Q22	D-1		
IC13	C-14	Q23	D-1		
IC14	B-13	Q24	D-3		
IC15	C-16	Q25	B-2		
IC16	B-14	Q26	B-2		
IC17	C-13	Q27	B-2		
IC18	A-13	Q28	B-4		
IC19	C-11	Q29	G-3		
IC20	E-10	Q30	G-3		
IC21	B-8	Q31	G-2		
IC22	B-7	Q32	G-2		
IC23	C-4	Q33	M-7		
IC24	A-6	Q35	L-11		
IC25	E-6	Q36	L-12		
IC26	B-9	Q37	M-13		
IC27	E-7	Q38	L-13		
IC28	J-8	Q39	E-13		
IC29	H-10	Q40	F-12		
IC30	I-8				
IC31	H-13	RP1	A-6		
IC32	G-6				
IC33	I-10	RV1	J-2		
IC34	J-11	RV2	A-3		
IC35	I-11	RV3	A-3		
IC36	J-6	RV4	E-15		
IC37	I-13	RV5	D-16		
IC38	F-13	RV6	B-10		
IC39	F-15				
IC40	F-15	S1	B-10		
IC41	H-16	S2	B-11		
IC42	K-16				
IC43	L-13	TP1	K-3		
IC44	L-16	TP2	K-3		

A



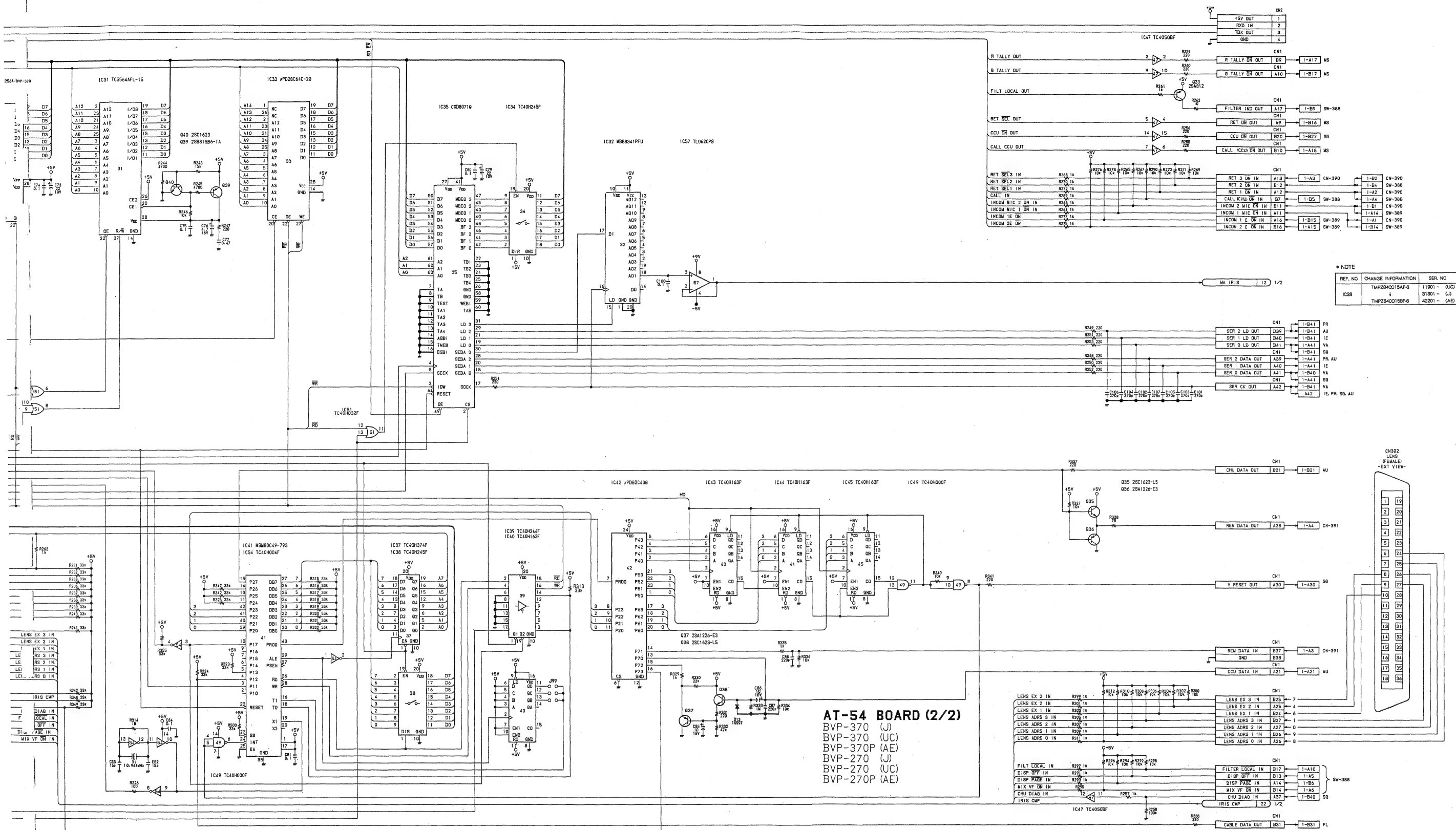


AT-54 BOARD (1/2)

BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)
BVP-270 (J)
BVP-270 (UC)
BVP-270P (AE)

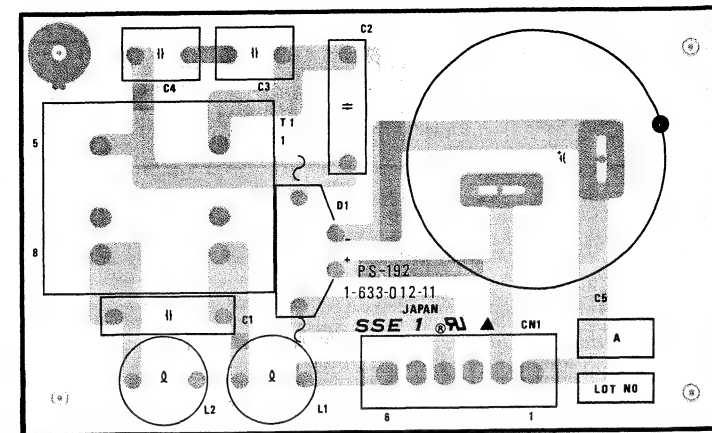
A



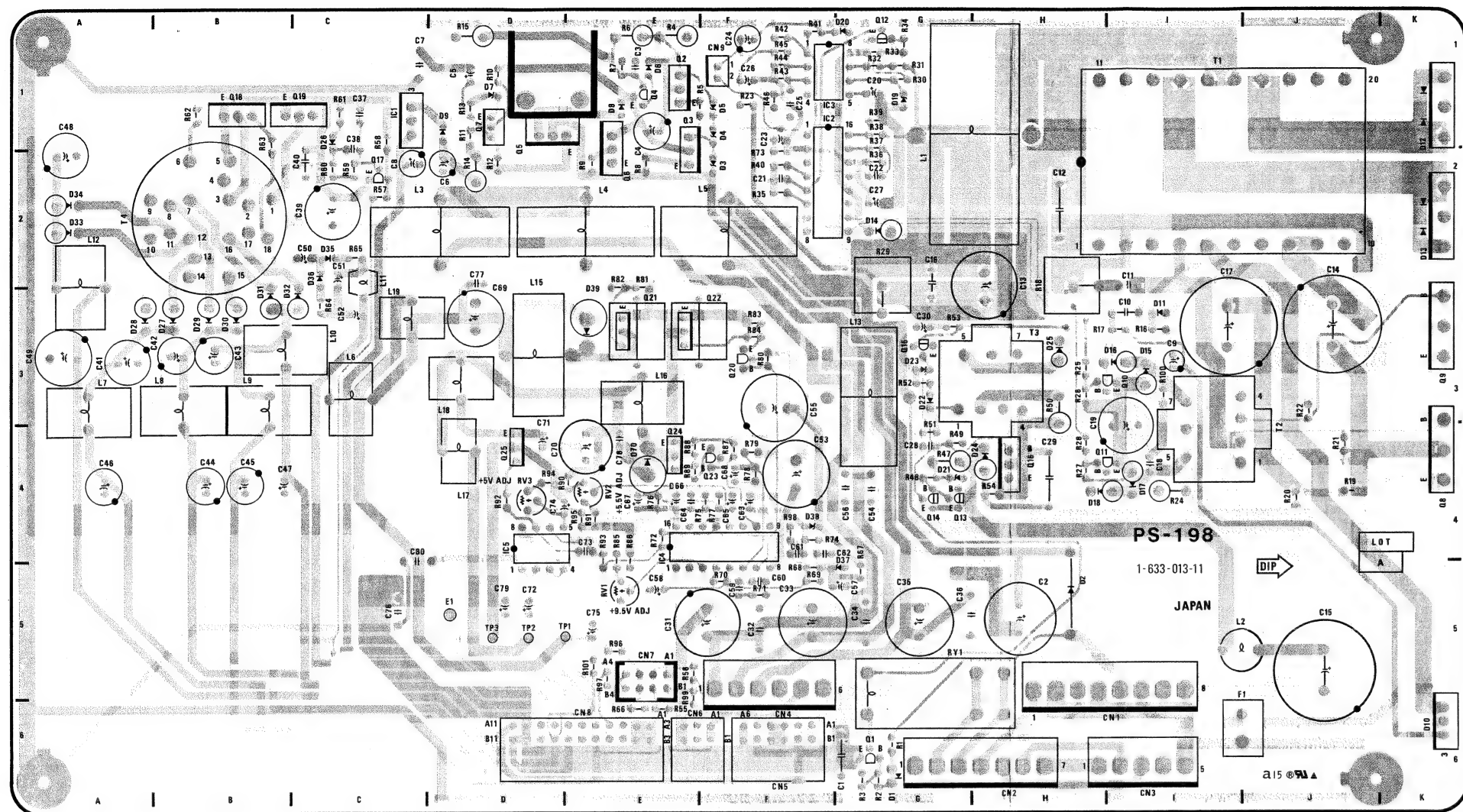


PS-192 BOARD

Serial No. 10001 - 10600 (UC)
30001 - 30400 (J)
40001 - 40700 (AE)



1-633-012-11 COMPONENT SIDE



1-633-013-11 COMPONENT SIDE

C-131 (a)

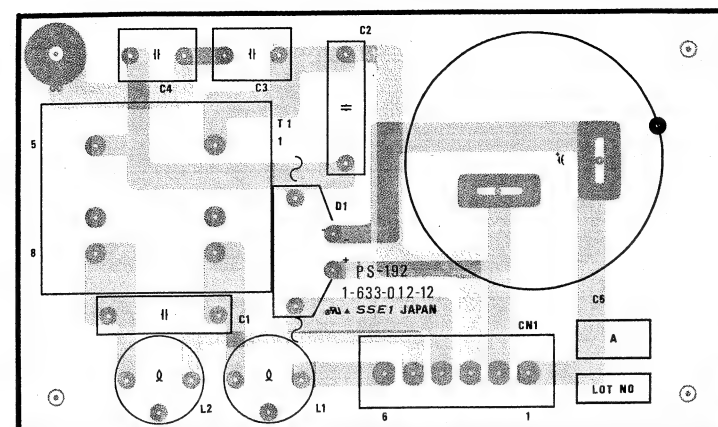
PS-198 1-633-013-11

CN1	I-6	Q10	I-3
CN2	H-5	Q11	H-4
CN3	I-6	Q12	G-1
CN4	F-5	Q13	G-4
CN5	F-5	Q14	G-4
CN6	E-5	Q15	G-3
CN7	E-5	Q16	H-4
CN8	E-5	Q17	C-2
CN9	F-1	Q18	B-1
		Q19	C-1
D1	G-6	Q20	F-3
D2	H-5	Q21	E-3
D3	F-2	Q22	F-3
D4	F-1	Q23	F-4
D5	F-1	Q24	E-4
D6	E-1	Q25	D-4
D7	D-1		
D8	E-1	RV1	E-5
D9	D-1	RV2	E-4
D10	K-6	RV3	D-4
D11	I-3		
D12	K-1	RY1	G-5
D13	K-2		
D14	G-2	TP1	D-5
D15	I-3	TP2	D-5
D16	I-3	TP3	D-5
D17	I-4		
D18	H-4	T1	I-1
D19	G-1	T2	J-4
D20	G-1	T3	H-3
D21	G-4	T4	A-2
D22	G-3		
D23	G-3		
D24	H-4		
D25	H-3		
D26	C-1		
D27	B-3		
D28	A-3		
D29	B-3		
D30	B-3		
D31	B-3		
D32	B-3		
D33	A-2		
D34	A-2		
D35	C-2		
D36	C-2		
D37	G-5		
D38	F-4		
D39	E-3		
D70	E-4		
E1	D-5		
F1	J-6		
IC1	C-1		
IC2	F-1		
IC3	F-1		
IC4	E-4		
IC5	D-4		
Q1	G-6		
Q2	E-1		
Q3	E-1		
Q4	E-1		
Q5	D-1		
Q6	E-2		
Q7	D-1		
Q8	K-4		
Q9	K-3		

C-132 (a)

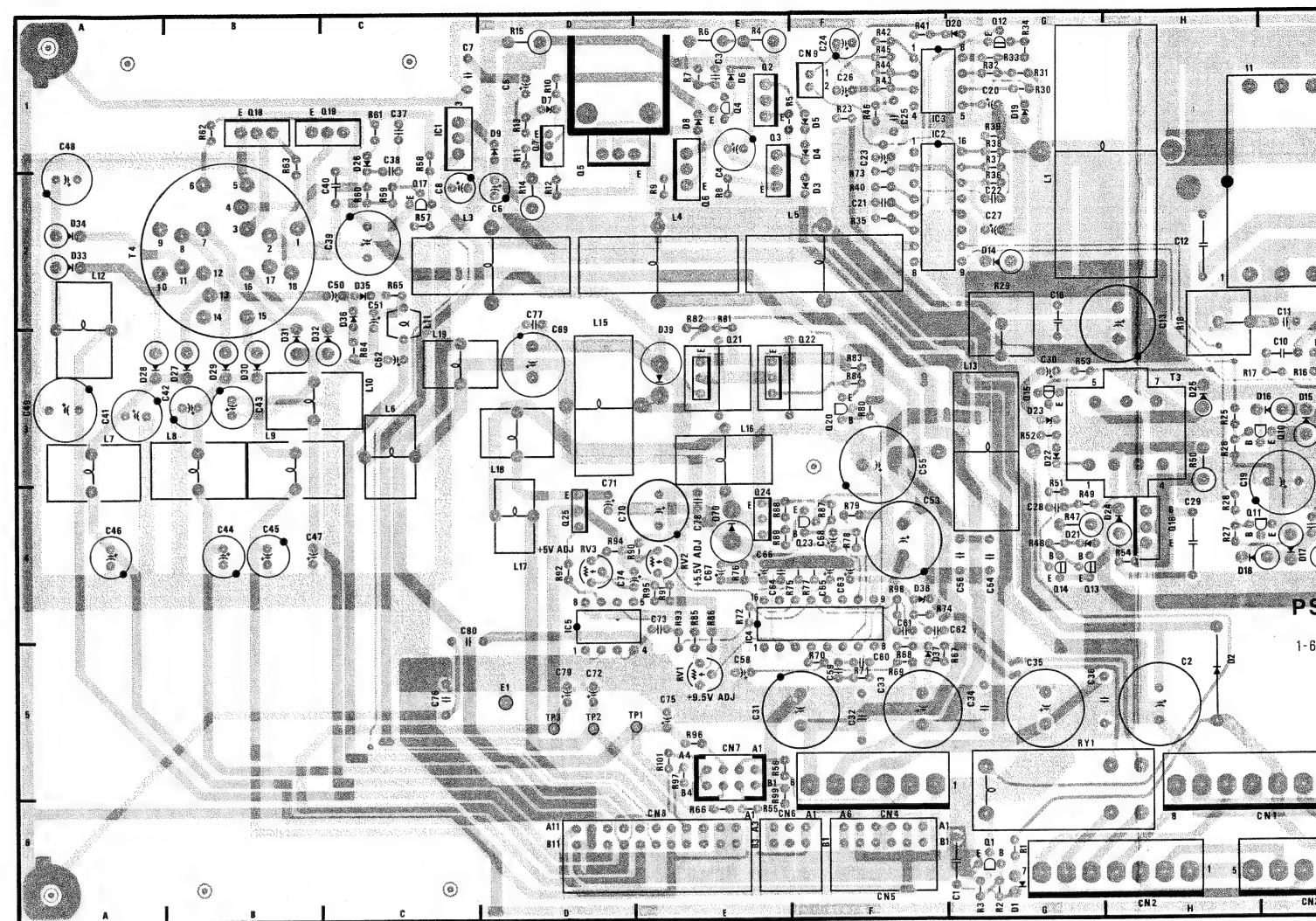
PS-192 BOARD

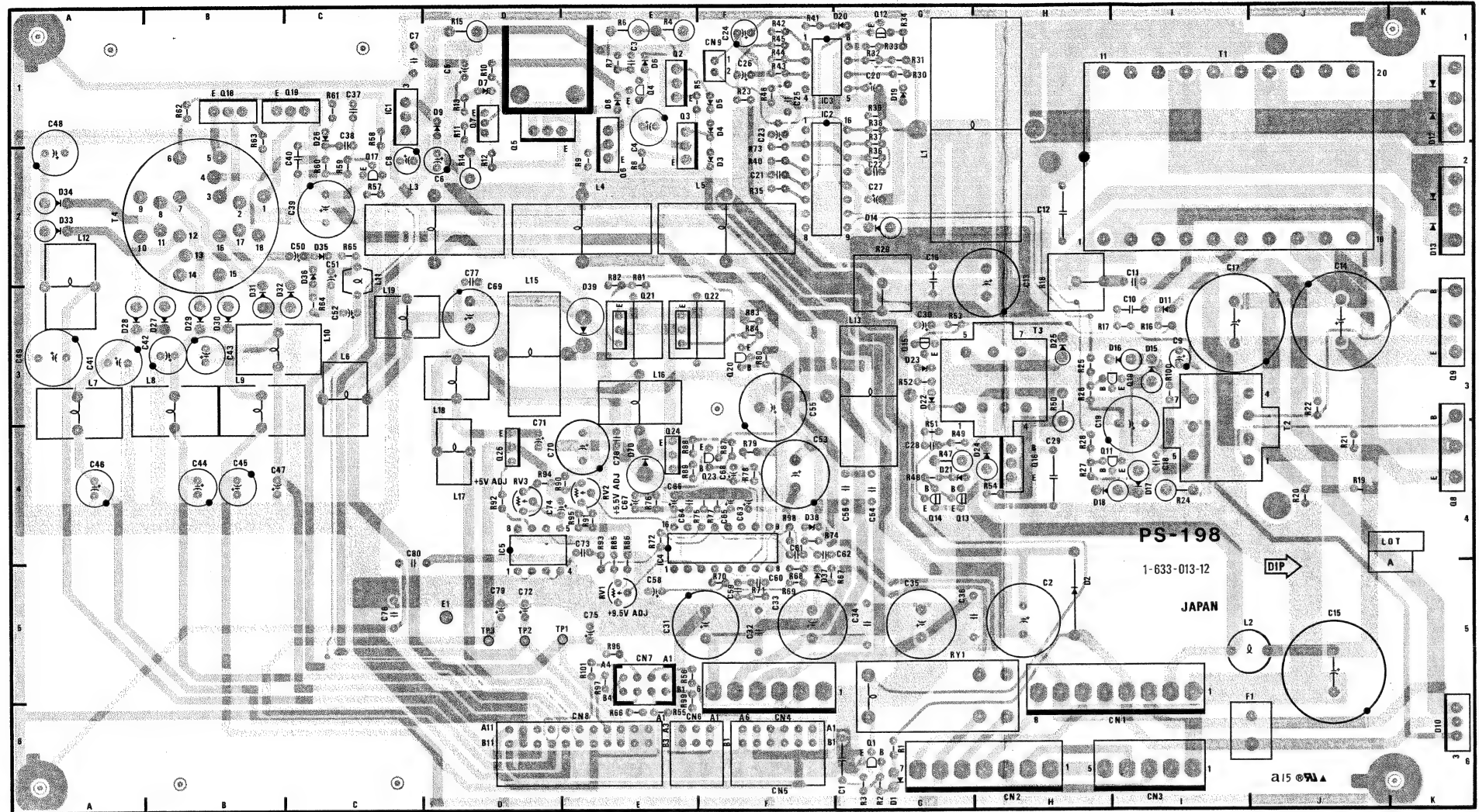
Serial No. 10601 - (UC)
30401 - (J)
40701 - (AE)



1-633-012-12 COMPONENT SIDE

PS-198 BOARD



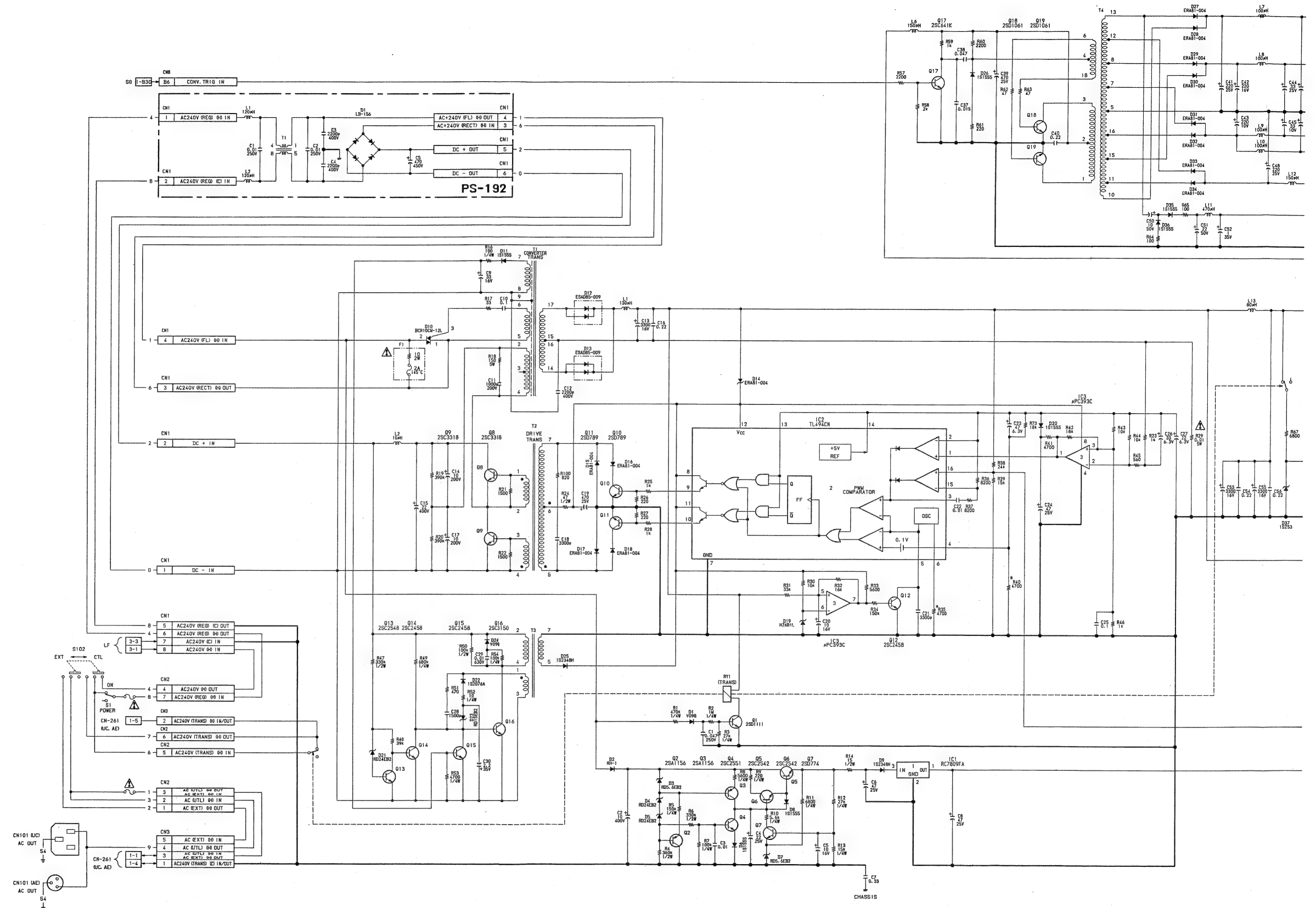


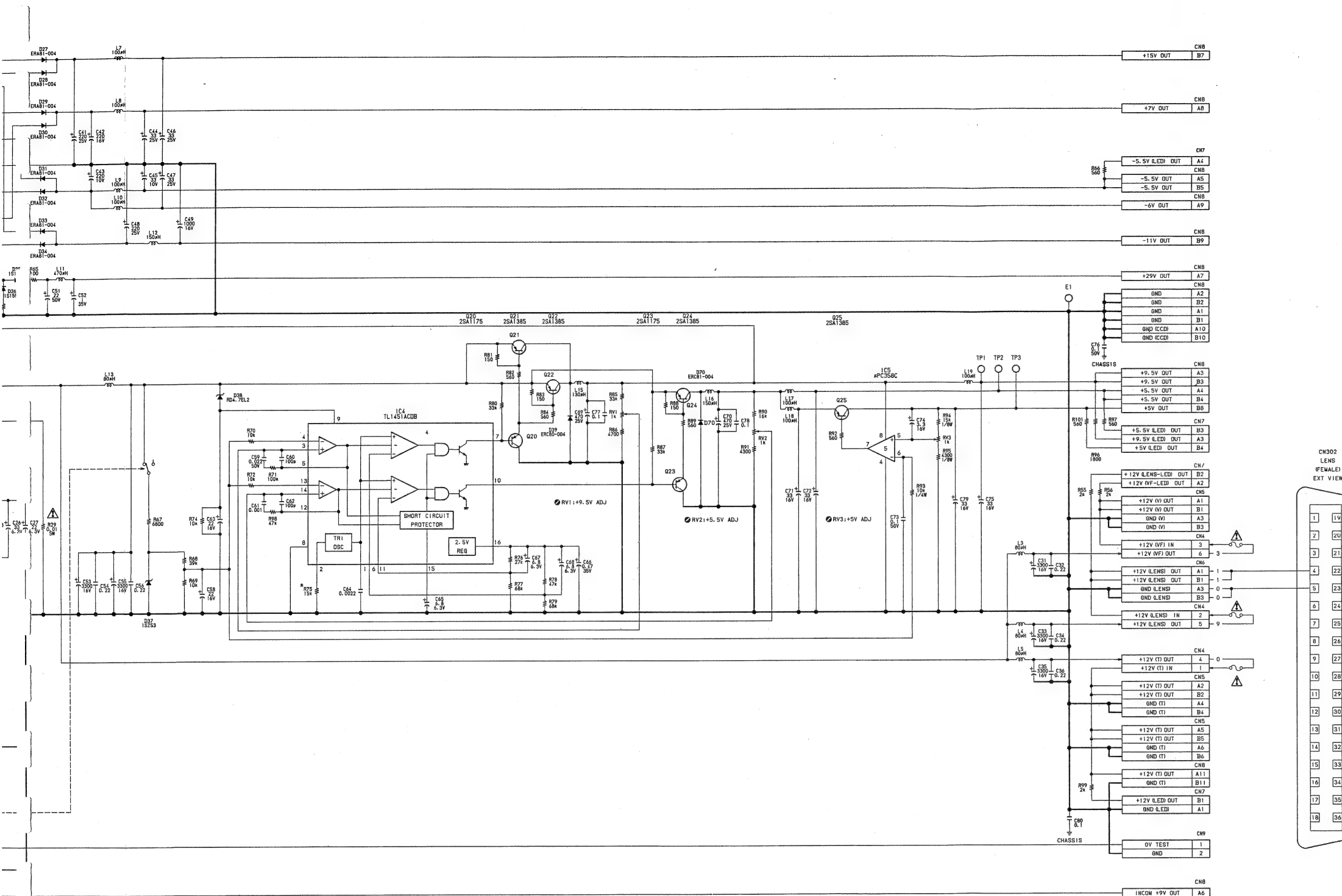
1-633-013-12 COMPONENT SIDE

PS-198 1-633-013-12

CN1	I-6	Q9	K-3
CN2	H-5	Q10	I-3
CN3	I-6	Q11	H-4
CN4	F-5	Q12	G-1
CN5	F-5	Q13	G-4
CN6	E-5	Q14	G-4
CN7	E-5	Q15	G-3
CN8	E-5	Q16	H-4
CN9	F-1	Q17	C-2
		Q18	B-1
		Q19	C-1
D1	G-6	Q20	F-3
D2	H-5	Q21	E-3
D3	F-2	Q22	F-3
D4	F-1	Q23	F-4
D5	F-1	Q24	E-4
D6	E-1	Q25	D-4
D7	D-1		
D8	E-1		
D9	D-1	RV1	E-5
D10	K-6	RV2	E-4
D11	I-3	RV3	D-4
D12	K-1		
D13	K-2	RY1	G-5
D14	G-2		
D15	I-3	TP1	D-5
D16	I-3	TP2	D-5
D17	I-4	TP3	D-5
D18	H-4		
D19	G-1	T1	I-1
D20	G-1	T2	J-4
D21	G-4	T3	H-3
D22	G-3	T4	A-2
D23	G-3		
D24	H-4		
D25	H-3		
D26	C-1		
D27	B-3		
D28	A-3		
D29	B-3		
D30	B-3		
D31	B-3		
D32	B-3		
D33	A-2		
D34	A-2		
D35	C-2		
D36	C-2		
D37	G-5		
D38	F-4		
D39	E-3		
D70	E-4		
E1	D-5		
F1	J-6		
IC1	C-1		
IC2	F-1		
IC3	F-1		
IC4	E-4		
IC5	D-4		
Q1	G-6		
Q2	E-1		
Q3	E-1		
Q4	E-1		
Q5	D-1		
Q6	E-2		
Q7	D-1		
Q8	K-4		

PS-192/198 BOARD





*NOTE

REF. NO	CHANGE INFORMATION	SER. NO
R35	5100 → 4700	11601- @VP-370:UC 31101- @VP-370:J 42001- @VP-370P:AD
R75	13K → 15K	10901- @VP-270:UC 30101- @VP-270:J 40401- @VP-270P:AD

PS-192 BOARD PS-198 BOARD

BVP-370 (J)
BVP-370 (UC)
BVP-370P (AE)
BVP-270 (J)
BVP-270 (UC)
BVP-270P (AE)

C-135

C-136

B-BVP370-PS192/198M

Serial No. 10001 - 10410 (UC)
30001 - 30305 (J)
40001 - 40420 (AE)



1-632-984-11
JAPAN

LOT NO.

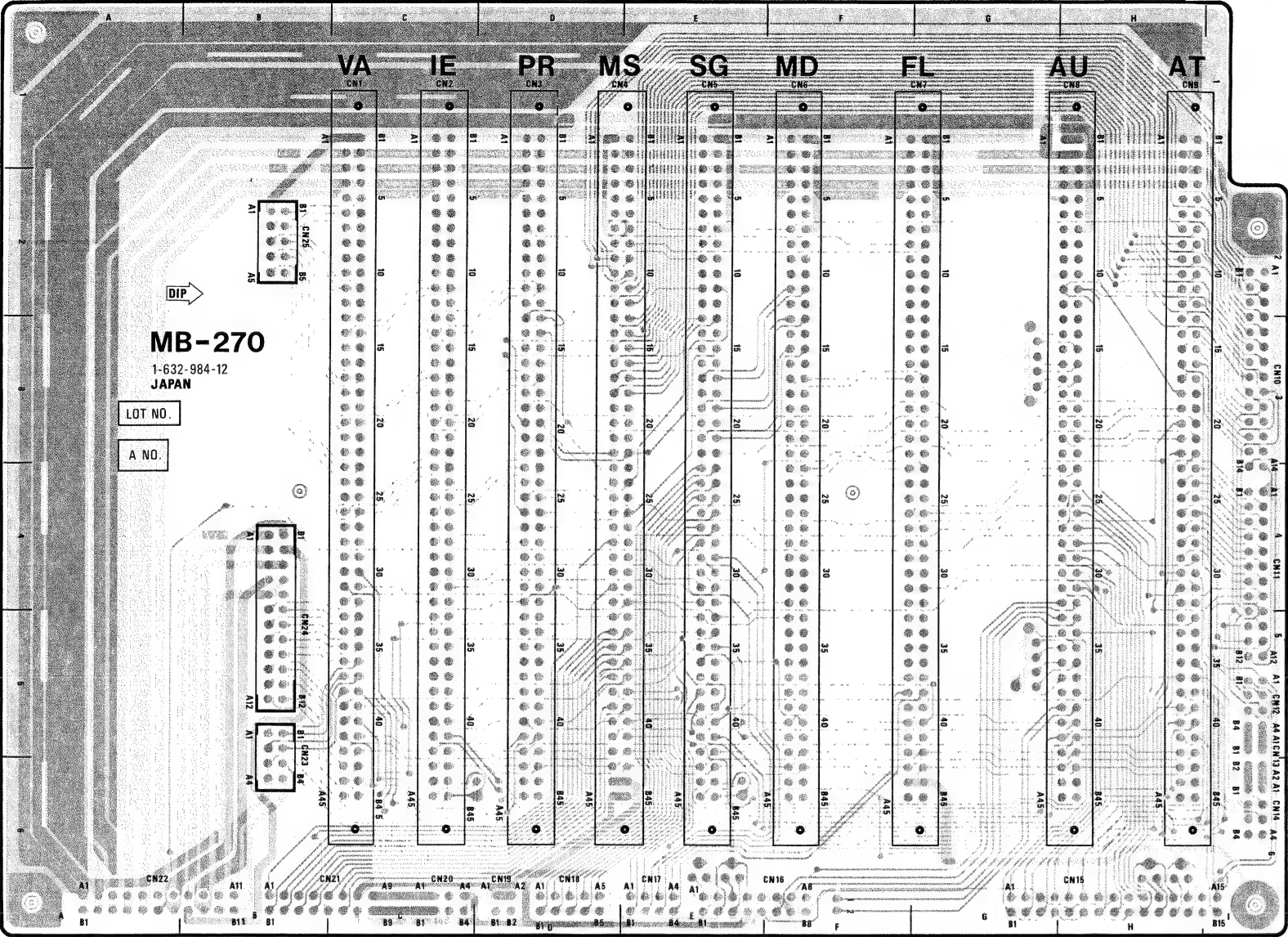
A NO.

SSE1 

1-632-984-11 COMPONENT

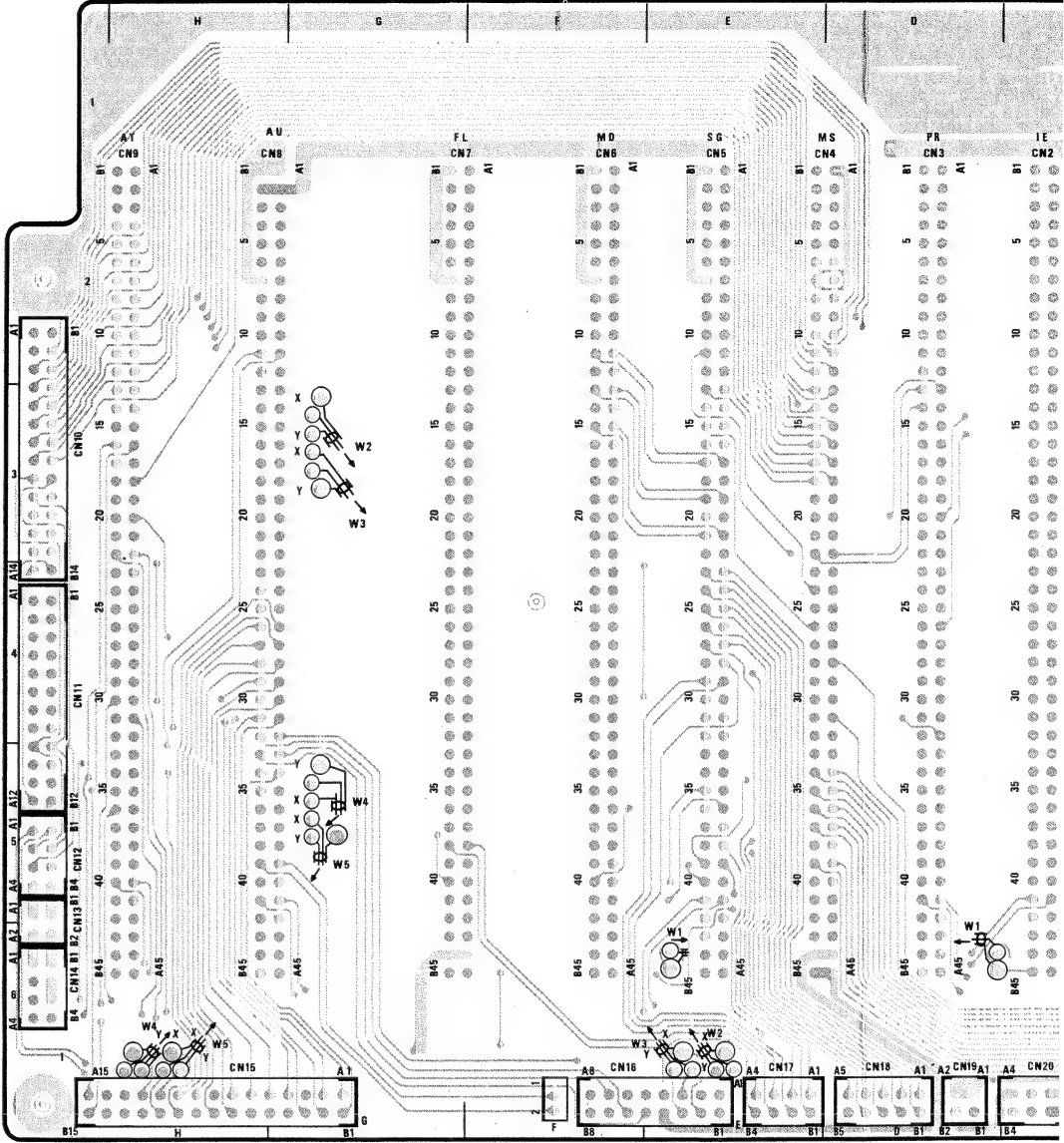
MB-270 BOARD

Serial No. 10501	—	(UC)
30401	—	(J)
40501	—	(AE)

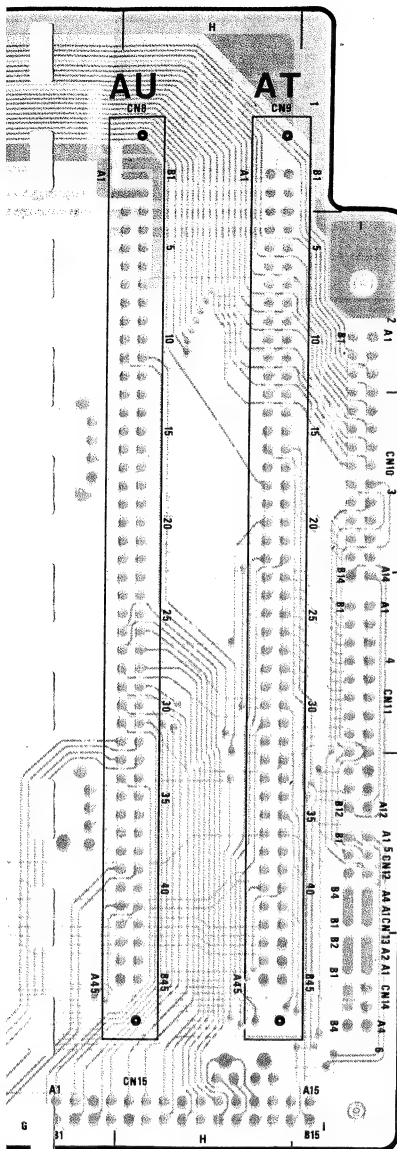


1-632-984-12 COMPONENT SIDE

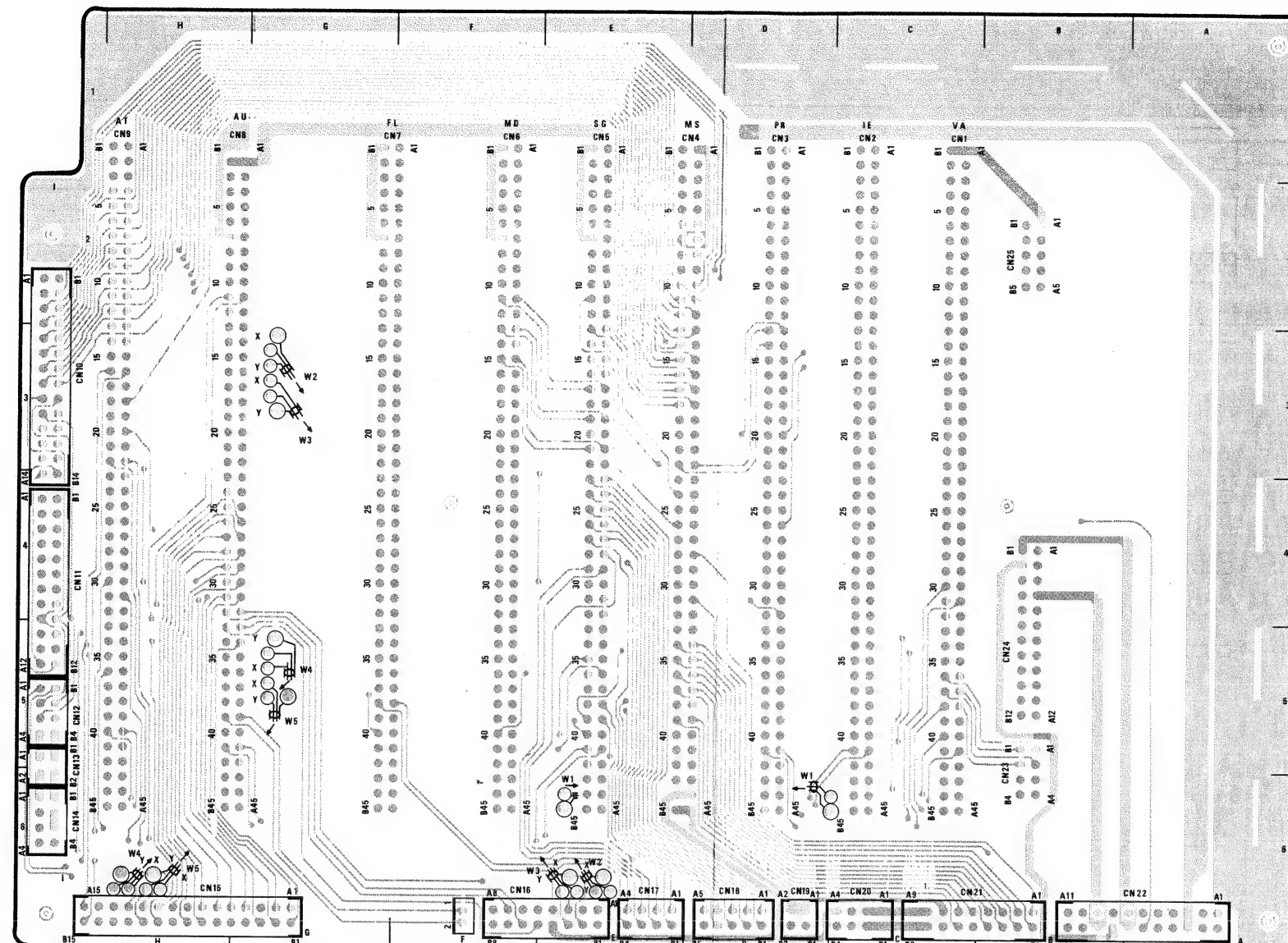
C-138 (b)



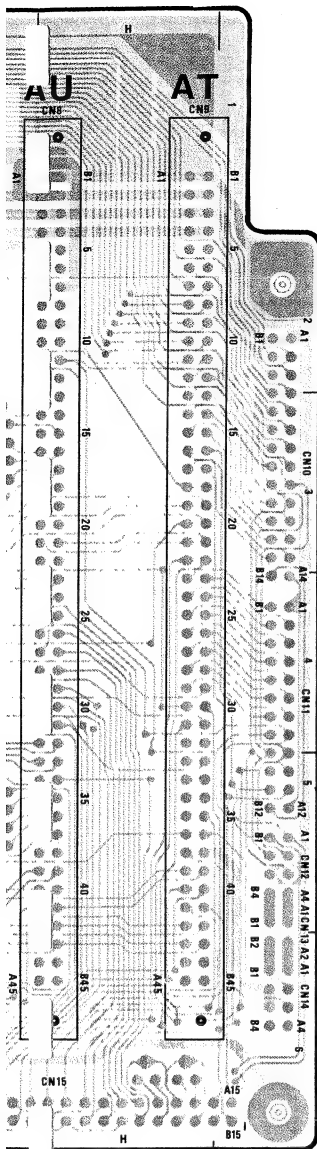
C-139 (b)



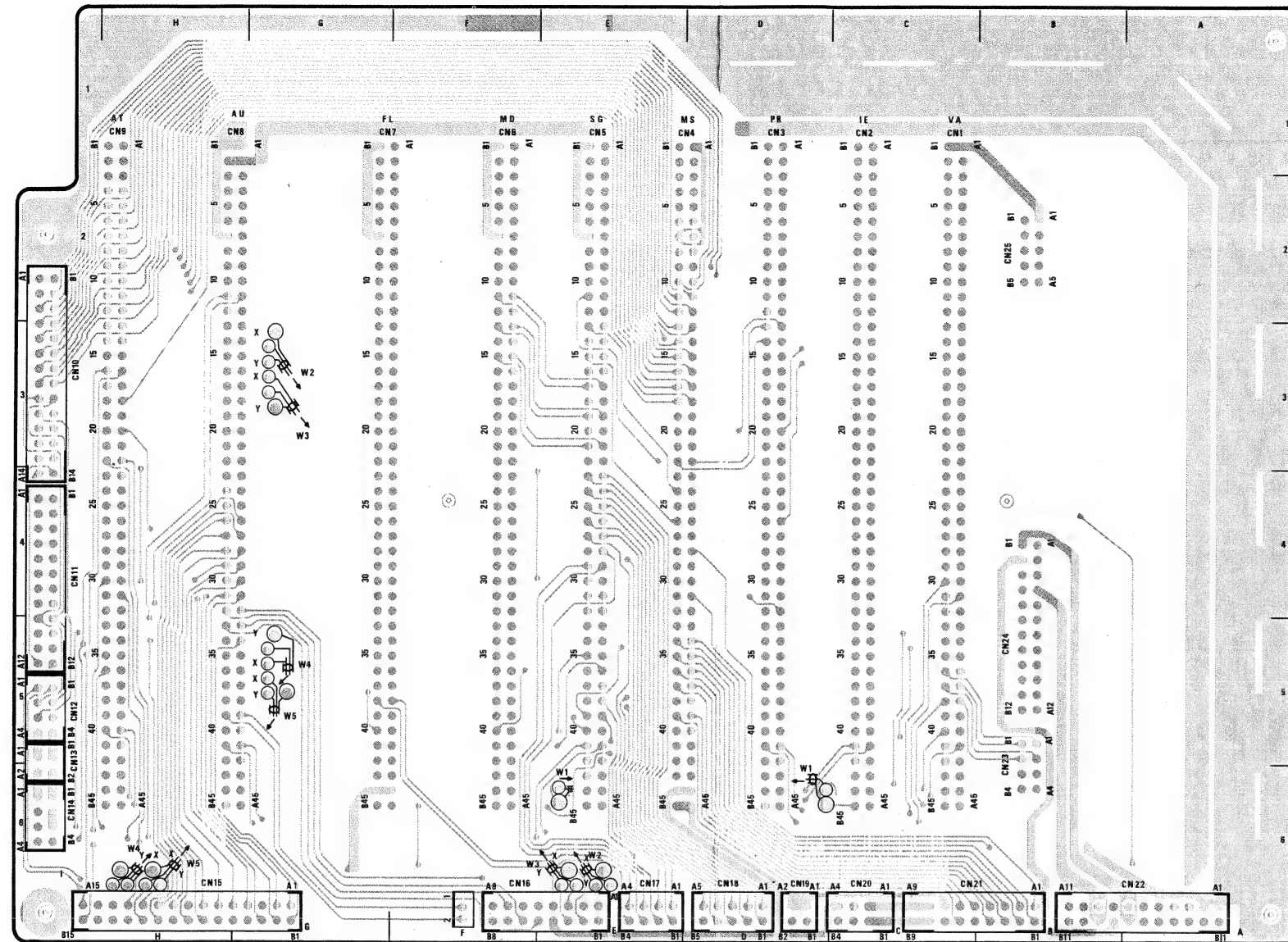
1-632-984-11 COMPONENT SIDE



1-632-984-11 SOLDERING SIDE



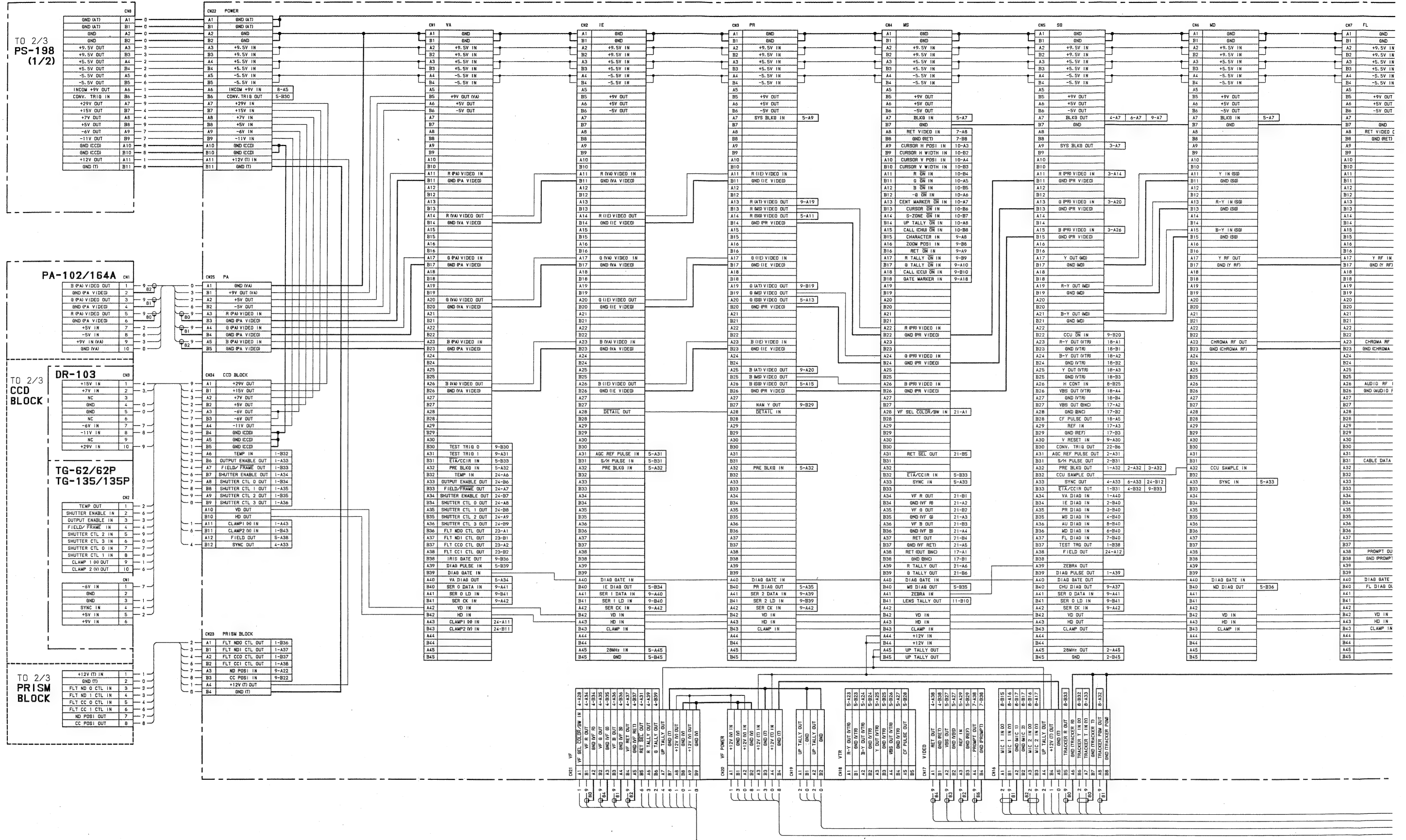
2-984-12 COMPONENT SIDE



1-632-984-12 SOLDERING SIDE

FRAME WIRING (1/3)

MB-270 BOARD



BVP-370/P

C-141

C-142

A

B

C

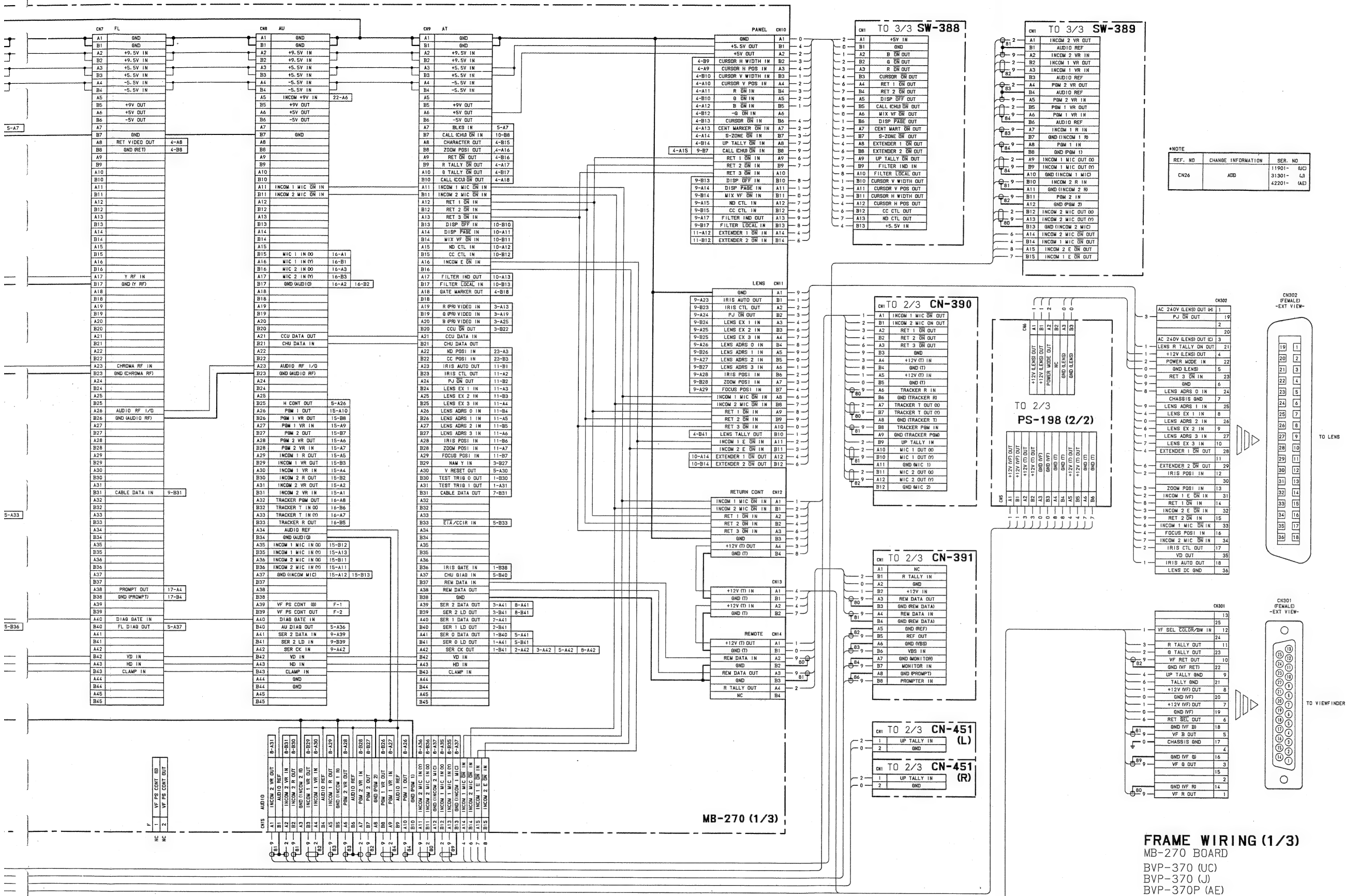
D

E

F

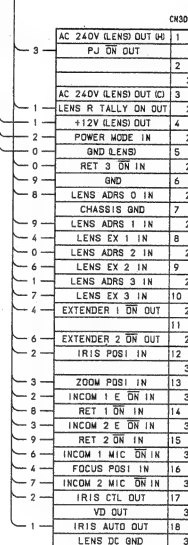
G

H

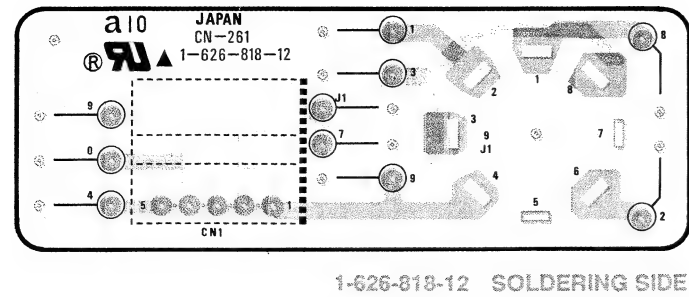


NOTE

REF. NO	CHANGE INFORMATION	SER. NO
CH26	ADD	11901- QUC 31301- QJ 42201- (AE)



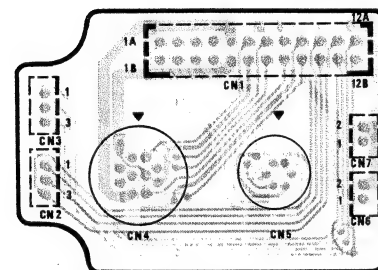
CN-261 BOARD



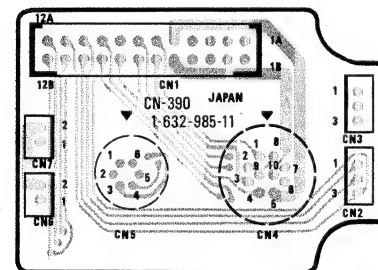
1-626-818-12 SOLDERING SIDE

CN-390 BOARD

Serial No. 10001 - 10010 (UC)
30001 - 30015 (J)
40001 - 40015 (AE)

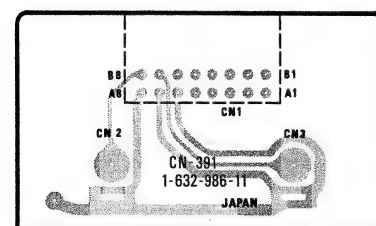


1-632-985-11 COMPONENT SIDE



1-632-985-11 SOLDERING SIDE

CN-391 BOARD



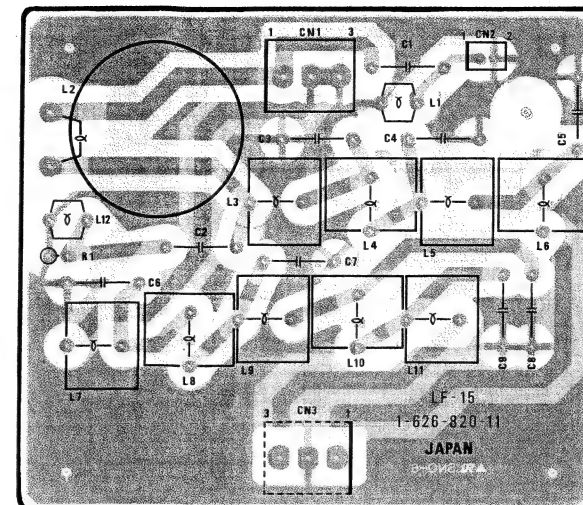
1-632-986-11 SOLDERING SIDE

C-147 (a)

CN-451 BOARD

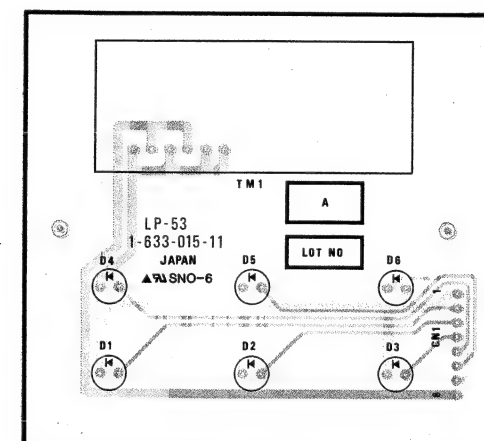
1-633-551-11
COMPONENT SIDE

LF-15 BOARD

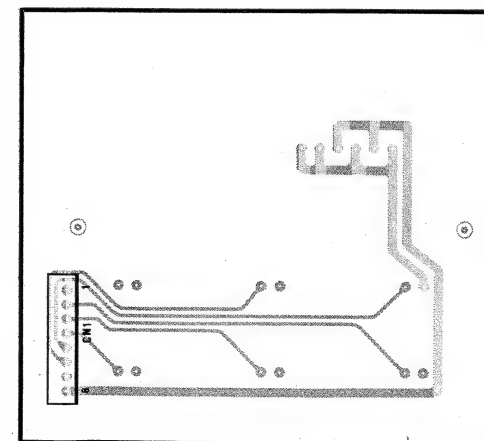


1-626-820-11 COMPONENT SIDE

LP-53 BOARD



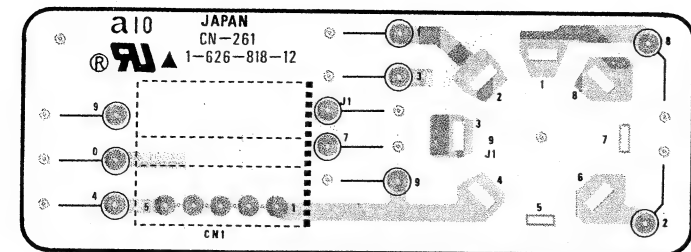
1-633-015-11 COMPONENT SIDE



1-633-015-11 SOLDERING SIDE

C-148 (a)

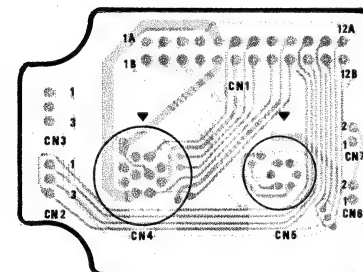
CN-261 BOARD



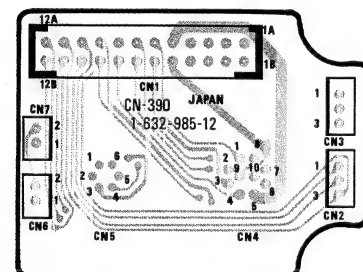
1-626-818-12 SOLDERING SIDE

CN-390 BOARD

Serial No. 10101 -	(UC)
30101 -	(J)
40101 -	(AE)

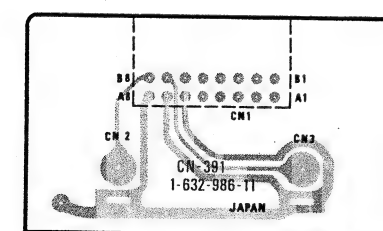


1-632-985-12 COMPONENT SIDE



1-632-985-12 SOLDERING SIDE

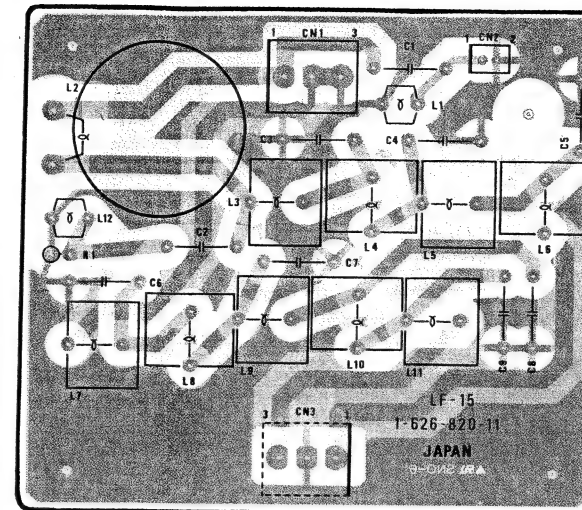
CN-391 BOARD



1-632-986-11 SOLDERING SIDE

C-147 (b)

LF-15 BOARD



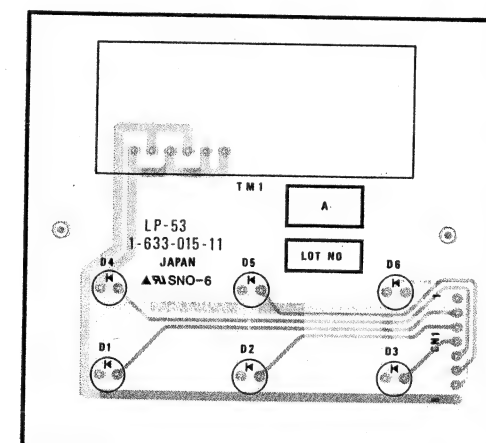
1-626-820-11 COMPONENT SIDE

CN-522 BOARD



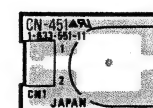
1-636-289-11 SOLDERING SIDE

LP-53 BOARD

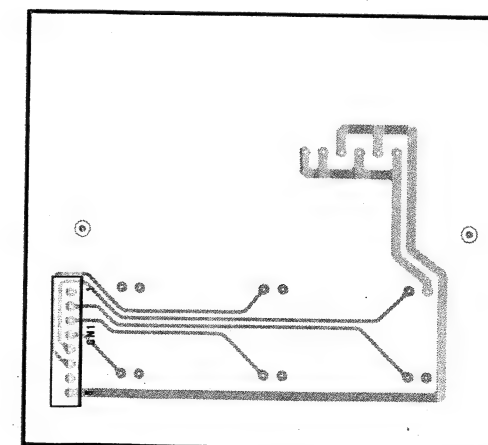


1-633-015-11 COMPONENT SIDE

CN-451 BOARD



1-633-551-11 COMPONENT SIDE



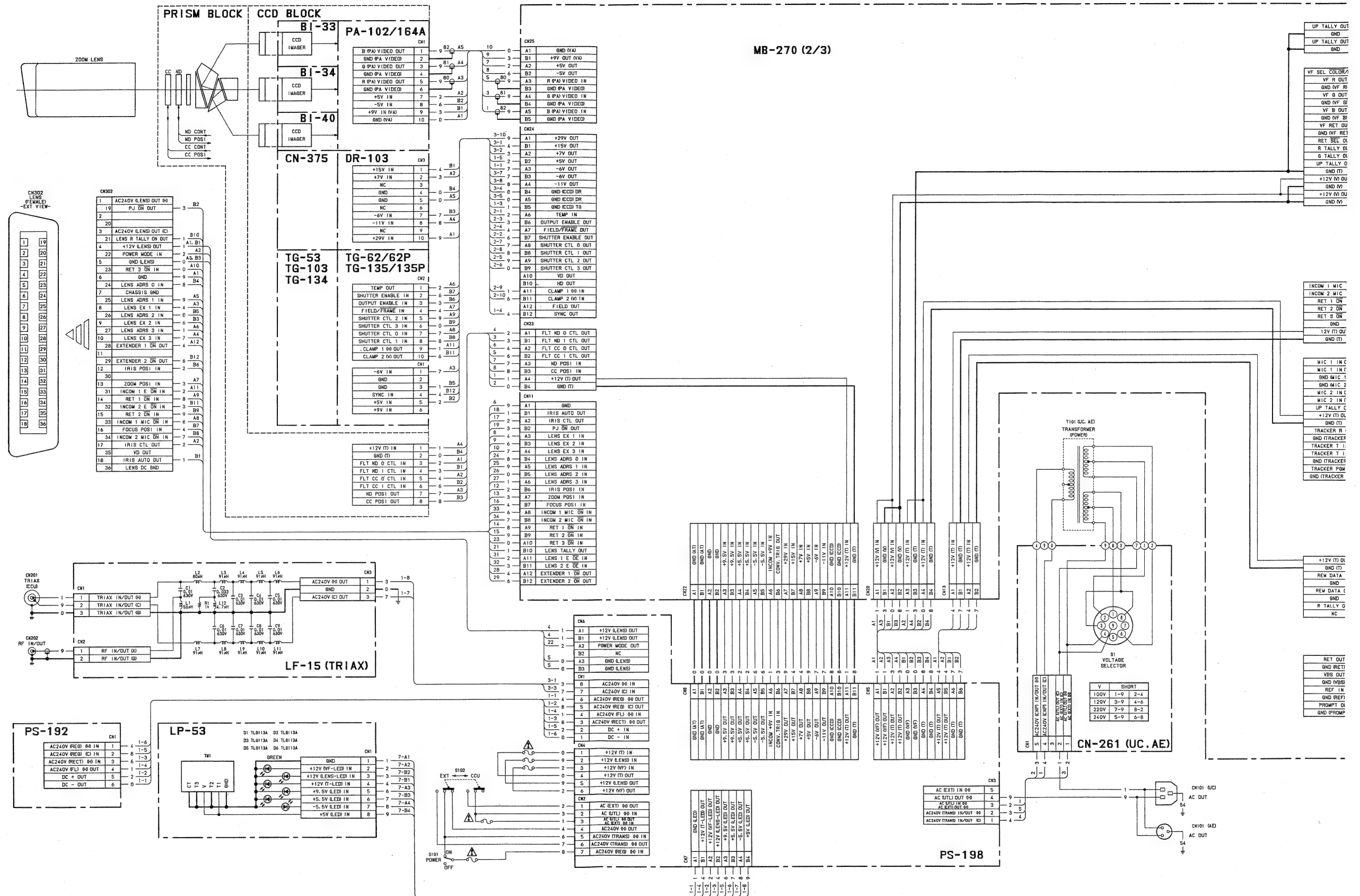
1-633-015-11 SOLDERING SIDE

C-148 (b)

BVP-370/P

FRAME WIRING (2/3)

CN-261 BOARD
CN-390 BOARD
CN391 BOARD
CN451 BOARD
CN522 BOARD
LF-15 BOARD
LP-53 BOARD



BVP-370/P

C-149

C-150

A

B

C

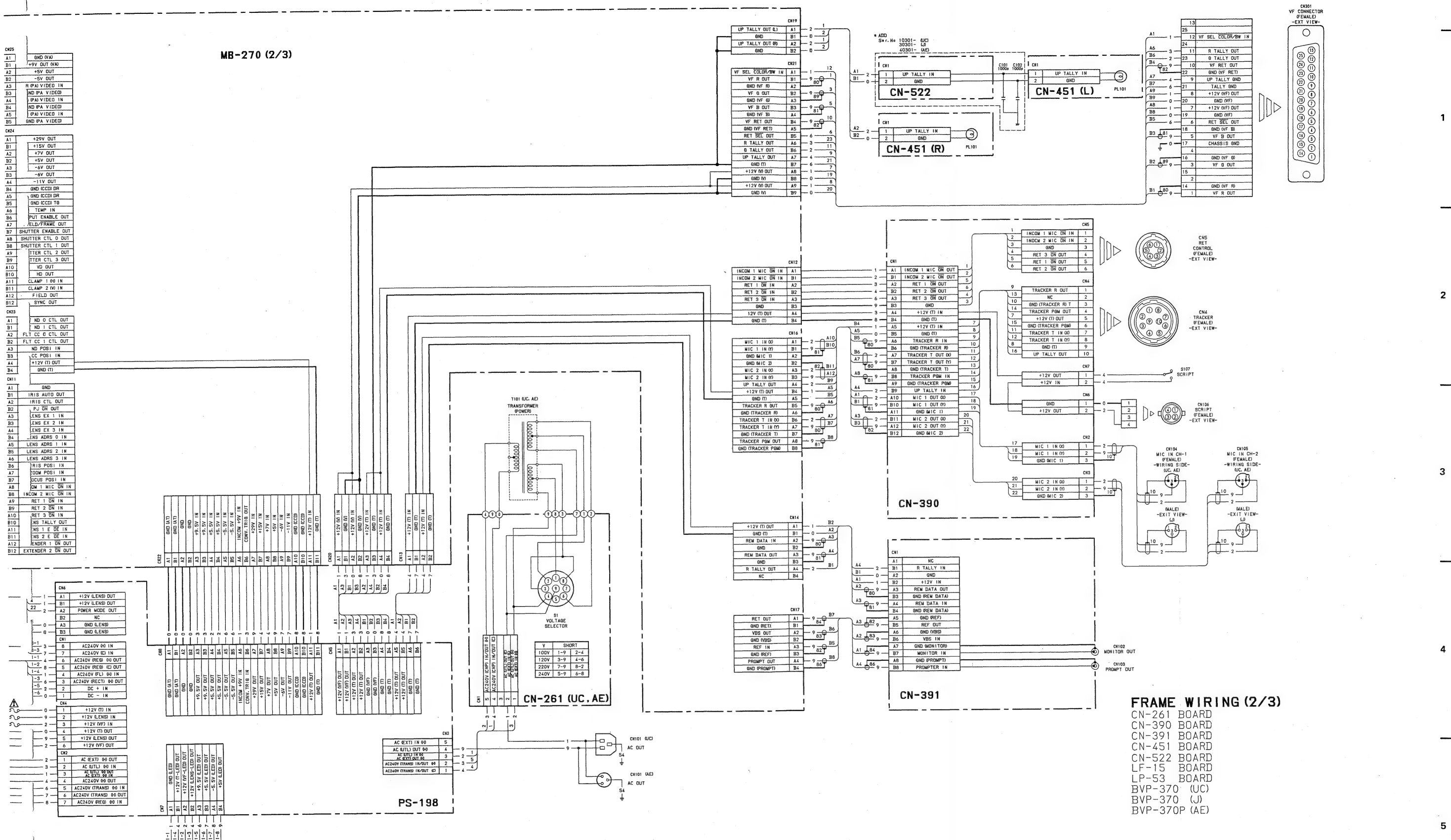
D

E

F

G

H



FRAME WIRING (2/3)

CN-261 BOARD
CN-390 BOARD
CN-391 BOARD
CN-451 BOARD
CN-522 BOARD
LF-15 BOARD
LP-53 BOARD
BVP-370 (UC)
BVP-370 (J)
BVP-370P (AE)

C-150

C-151

B-BVP370-FRAME/M#2

1-632-987-12 SOLDERING SIDE

1-632-988-12
SOLDERING SIDE

1-632-990-11
COMPONENT SIDE

1-633-014-12 COMPONENT SIDE

1-633-014-12 SOLDERING SIDE

1-632-989-12 COMPONENT SIDE

1-632-989-12 SOLDERING SIDE

FRAME WIRING (3/3)

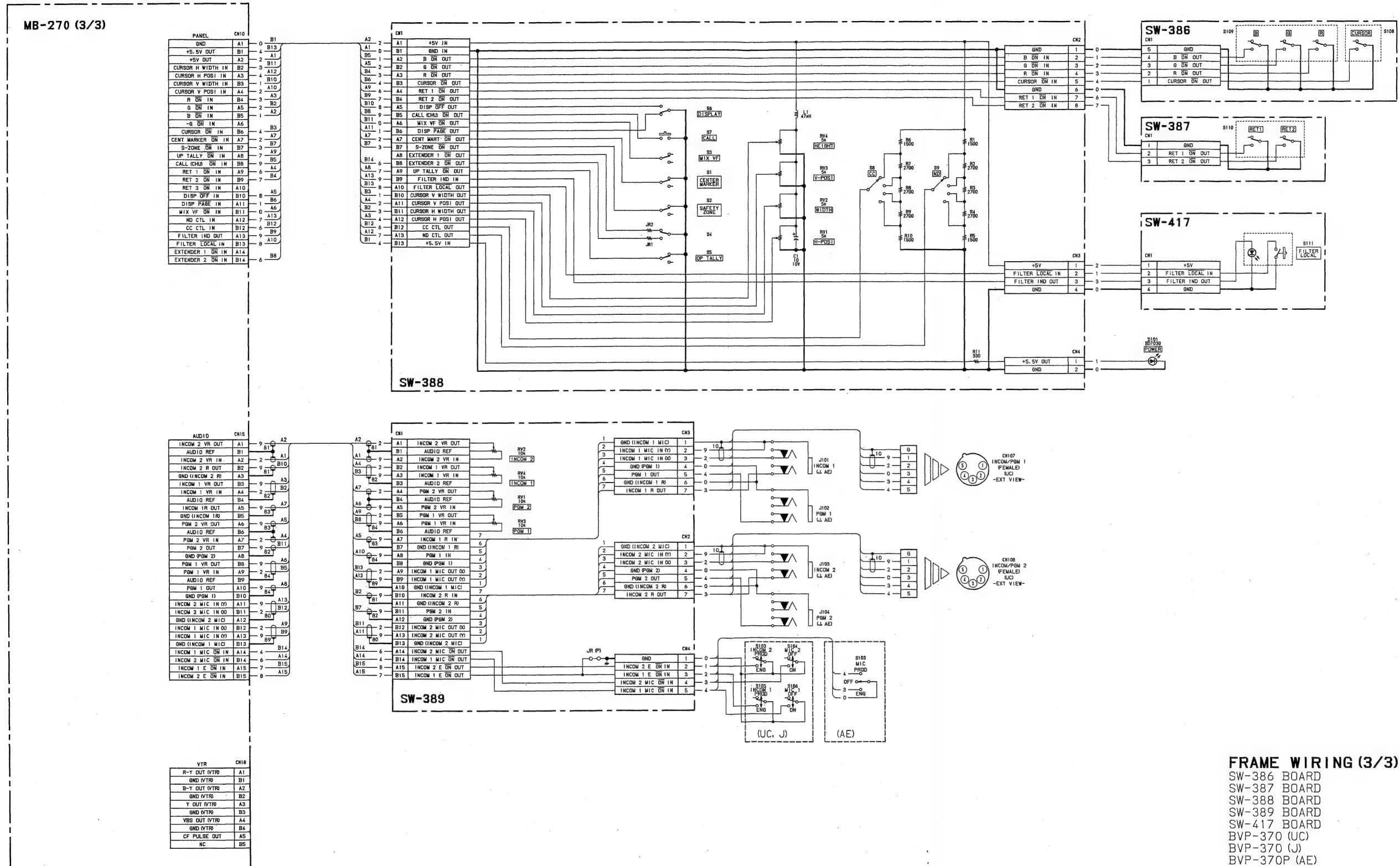
SW-386 BOARD

SW-387 BOARD

SW-388 BOARD

SW-389 BOARD

SW-417 BOARD



SECTION D

SPARE PARTS

PARTS INFORMATION

1. Safety Related Component Warning

Components identified by shading marked with Δ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony parts whose parts numbers appear as shown in this manual or in service manual supplements published by Sony.

2. Replace parts that are supplied from Sony Parts Center can sometimes have different shape and external appearance than what are actually used in equipment. This is due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts."
 - This manual's exploded view and electrical spare parts lists are indicating the parts numbers of "the standardized genuine parts at present."
 - Regarding engineering parts and diagrams changes in our engineering department, refer to Sony service bulletins and service manual supplements.
3. The parts marked with "S" in the SP column of the exploded views and electrical spare parts list are normally required for routine service work. Orders for parts marked with "O" will be processed, but allow for additional delivery time.
4. Item with no parts number and/or no description are not stocked because they are seldom required for routine service.

5. Abbreviation

REF. No.	DESCRIPTION	REF. No.	DESCRIPTION	REF. No.	DESCRIPTION
BT	BATTERY	FB	FERRITE BEAD	RV	VARIABLE RESISTOR
BZ	BUZZER	FL	FILTER	RY	RELAY
C	CAPACITOR	IC	IC	S	SWITCH
CN	CONNECTOR	L	INDUCTOR	T	TRANSFORMER
CP	COMBINATION PARTS	LV	VARIABLE INDUCTOR	TH	THERMISTOR
CV	VARIABLE CAPACITOR	Q	TRANSISTOR	TM	TIMER
D	DIODE	R	RESISTOR	VDR	VARISTOR
DL	DELAY LINE	RB	RESISTOR BLOCK	X	OSCILLATOR

All capacitors are in micro farads unless otherwise specified.
All inductors are in micro henries unless otherwise specified.
All resistors are in ohms.

EXPLODED VIEW

FRONT PANEL BLOCK

No.	Part No.	SP Description
1	A-7575-218-A	s CCD UNIT-P370A(NTSC) (BVP-370:J, UC) *1 *2
2	A-8267-490-A	s CCD UNIT-P370P/2 (CCIR) (BVP-370P:AE) *1 *2
3	A-7575-140-B	s CCD UNIT (NTSC) (BVP-270:J, UC) *3
4	A-7575-141-B	s CCD UNIT (CCIR) (BVP-270P:AE) *3
5	X-3692-305-1	o RETAINER ASSY, LENS
6	X-3692-312-3	o STAY (LEFT) ASSY
7	X-3692-313-3	o STAY (RIGHT) ASSY
8	X-3740-808-1	o MOUNT ASSY, LENS (J)
9	X-3740-809-2	o MOUNT ASSY, LENS (UC, AE)
10	1-547-391-11	o FILTER UNIT, LOW PASS (3) (ONLY FOR CCD UNIT W/BLOCK NO. LxxxxxN or LxxxxxP)
11	1-547-403-11	o GLASS UNIT, DUMMY
12	1-547-405-11	o UNIT, FILTER
13	1-547-406-11	o DRIVER, SURVO
14	2-391-520-21	s BOLT (M5X12), HOLE, HEXAGON
15	3-673-018-00	s SCREW, BLIND
16	3-692-449-01	o GUIDE, LENS BAR (J)
17	3-692-553-01	o RING, O
18	3-692-571-01	o PAD
19	3-692-573-01	o COVER, EDGE
20	3-692-574-02	o PLATE, FRONT
21	3-698-120-01	o TUBE, SHIELD
22	3-698-121-01	s SCREW (M4)
23	3-701-510-00	s SET SCREW, DOUBLE POINT 4X4
24	3-740-805-01	o RETAINER, GUIDE SHAFT (J)
25	3-740-815-11	o PIPE, HANDLE
26	3-740-815-21	o PIPE, HANDLE (J)
27	3-173-303-11	o COVER, PIPE
28	3-173-303-21	o COVER, PIPE (J)
29	3-740-817-01	o ESCUTCHEON, PIPE
30	3-741-772-01	o RUBBER, BRIND
31	4-858-582-00	s SPRING, COMPRESSION
32	3-173-304-01	o RING, STOPPER

*1) When replacing the CCD unit having block No. LxxxxxN or LxxxxxP with the CCD block of parts No. A-7575-218-A or A-8267-490-A, replacing the LOW PASS FILTER UNIT with the DUMMY GLASS UNIT (Sony Part No.1-547-403-11) is also required at the same time.
For details, see Section 3 REPLACEMENT OF MAIN PARTS.

*2) E K A xxxxx
 ↑ ↑ ↑ ↑
 Block No. of CCD unit
 Suffix of Spare Part No.
 Model Name (K; BVP-370, L;BVP-370P)
 CCD Type

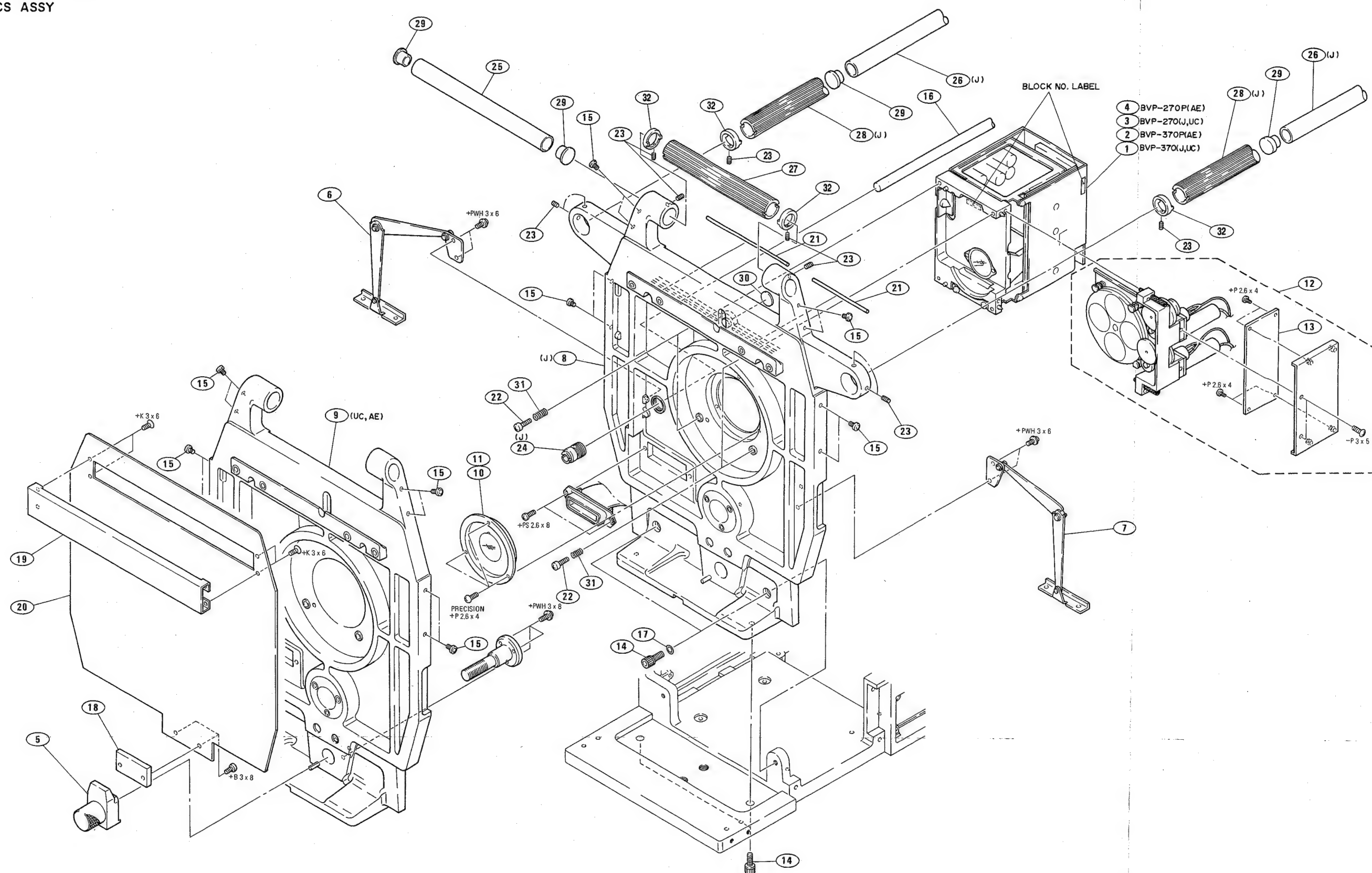
*3) O A xxxxx N
 ↑ ↑ ↑
 N:NTSC, P:CCIR
 Block number of CCD UNIT
 Indicates a version of CCD unit

FRONT PANEL BLOCK

FRONT PANEL ASSY
OPTICS ASSY

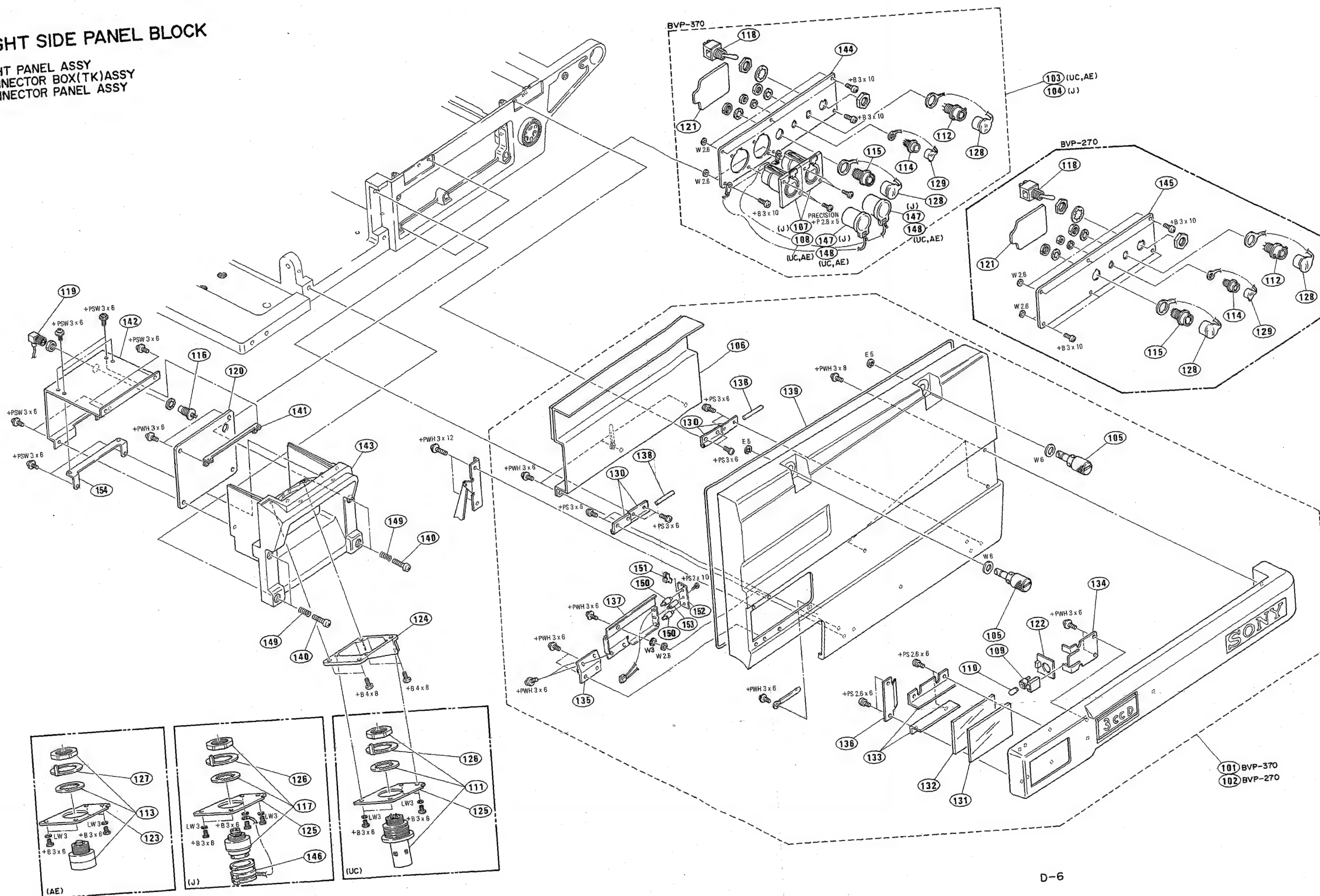
FRONT PANEL BLOCK

FRONT PANEL BLOCK



RIGHT PANEL ASSY
CONNECTOR BOX(TK)ASSY
CONNECTOR PANEL ASSY

RIGHT SIDE PANEL BLOCK



BVP-370/P
BVP-270/P

RIGHT SIDE PANEL BLOCK

No.	Part No.	SP Description
101	A-7420-175-A	o PANEL (RIGHT) ASSY, SIDE (BVP-370)
102	A-7420-178-A	o PANEL (RIGHT) ASSY, SIDE (BVP-270)
103	A-7603-129-A	o PANEL (MIC) ASSY, CONNECTOR (BVP-370:UC, AE)
104	A-7603-130-A	o PANEL (MIC) ASSY, CONNECTOR (BVP-370:J)
105	A-7612-371-B	o KNOB ASSY
106	X-3740-802-1	o STOPPER ASSY, PC BOARD
107	1-509-176-31	s CONNECTOR, 3P MALE "MIC IN CH-1, CH-2" (BVP-370:J)
108	1-509-184-31	s CONNECTOR 3P FEMALE "MIC IN CH-1, CH-2" (BVP-370:UC, AE)
109	1-517-075-00	s SOCKET, LAMP
110	1-518-411-00	s LAMP
111	1-560-743-00	s CONNECTOR, COAXIAL (MALE) (UC)
112	1-561-376-00	s CONNECTOR (S) 4P FEMALE "SCRIPT"
113	1-561-844-00	s CONNECTOR, COAXIAL FEMALE (AE)
114	1-562-222-00	s CONNECTOR 6P FEMALE "RET CONTROL"
115	1-565-443-11	o CONNECTOR 10P FEMALE "TRACKER"
116	1-565-656-11	o CONNECTOR, COAXIAL (2.5C) (MALE)
117	1-565-797-11	s CONNECTOR, DOUBLE COAXIAL (J)
118	1-570-296-21	s SWITCH, TOGGLE "SCRIPT"
119	1-575-400-11	o CABLE ASSY, RF
120	1-626-820-11	o PRINTED CIRCUIT BOARD, LF-15
121	1-632-985-12	o PRINTED CIRCUIT BOARD, CN-390
122	1-633-551-11	o PRINTED CIRCUIT BOARD, CN-451
123	2-111-359-01	o BRACKET, F CONNECTOR (AE)
124	2-111-360-01	o TABLE, CONNECTOR
125	2-111-361-01	o BRACKET, K CONNECTOR (J, UC)
126	2-365-236-00	o LUG (K), GROUND (J, UC)
127	2-365-265-00	o LUG (F) (2), GROUND (AE)
128	3-678-769-00	s CAP
129	3-685-115-01	s CAP (6P), DROP PROTECTION
130	3-692-358-02	o HINGE
131	3-692-536-02	o COVER (A), TALLY
132	3-692-537-02	o COVER (B), TALLY
133	3-692-538-01	o RETAINER, TALLY COVER
134	3-692-539-01	o HOLDER, TALLY
135	3-692-540-01	o HINGE
136	3-692-541-02	o COVER (1), REAR, TALLY
137	3-166-451-02	o COVER (R), TALLY
138	3-692-547-01	o PIN, PARALLEL
139	3-698-120-01	o TUBE, SHIELD
140	3-698-121-01	s SCREW (M4)
141	3-698-150-01	o NUT, PLATE
142	3-698-165-04	o PLATE, SHIELD
143	3-698-167-03	o BOX, CONNECTOR
144	3-740-843-01	o PANEL (C), CONNECTOR (BVP-370)
145	3-740-867-01	o PANEL (B), CONNECTOR (BVP-270)
146	3-741-725-01	o CAP (TK), CONNECTOR, TRIAX (J)
147	3-741-726-01	o CAP (2), XLR (BVP-370:J)
148	3-741-727-01	o CAP (1), XLR (BVP-370:UC, AE)
149	4-858-582-00	s SPRING, COMPRESSION
150	1-102-363-00	s CAP, CERAMIC 1000PF
151	1-506-481-11	o CONNECTOR, 2P
152	1-636-289-11	o PRINTED CIRCUIT BOARD, CN-522
153	3-657-841-51	o SPACER 2X6
154	3-167-280-01	o SUPPORT

LEFT SIDE PANEL BLOCK

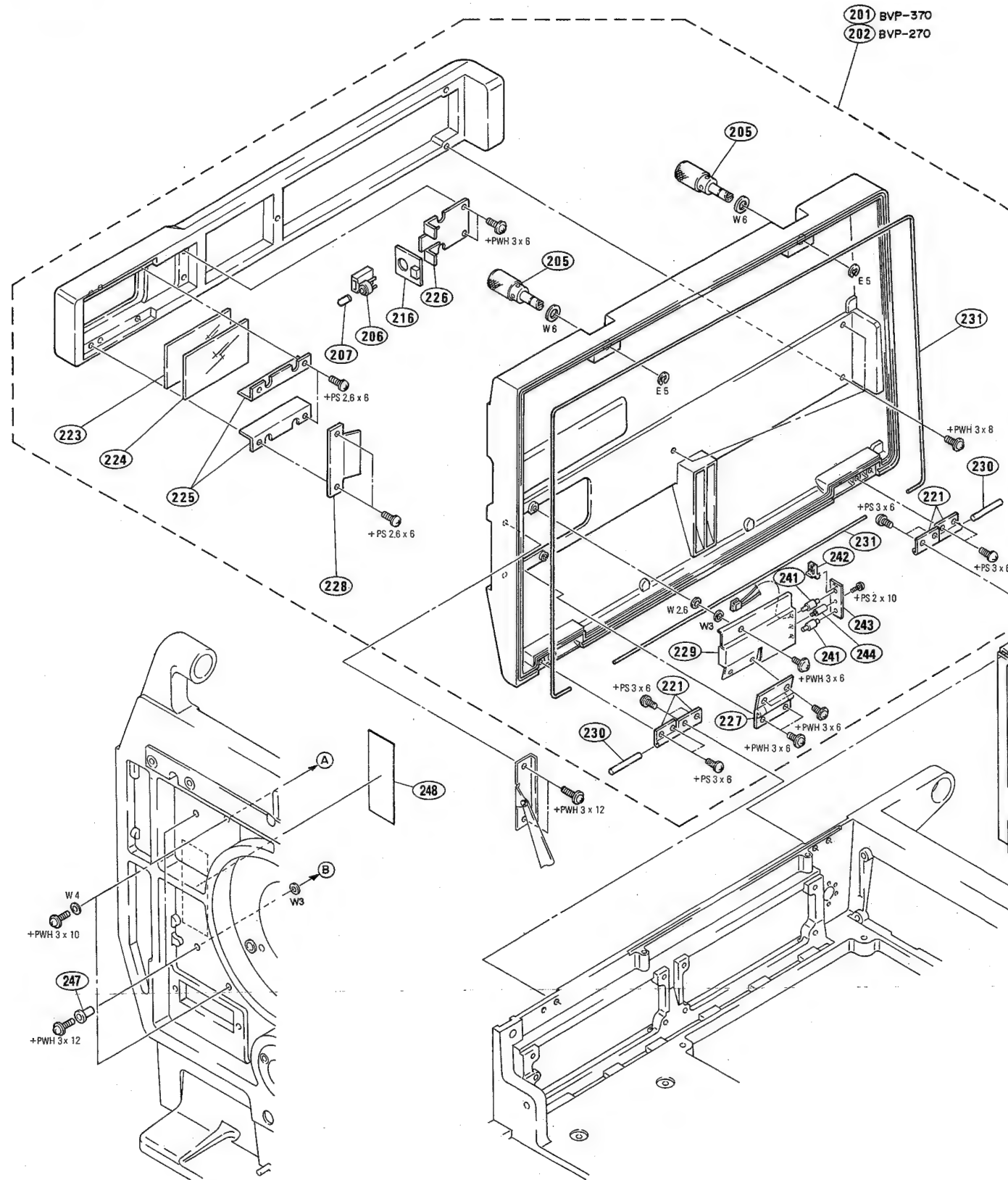
No.	Part No.	SP Description
201	A-7420-174-A	o PANEL (LEFT) ASSY, SIDE (BVP-370)
202	A-7420-177-A	o PANEL (LEFT) ASSY, SIDE (BVP-270)
203	A-7515-062-A	o MOUNTED CIRCUIT BOARD, MB-270
204	A-7515-076-A	o MOUNTED CIRCUIT BOARD, PS-198
205	A-7612-371-B	o KNOB ASSY
206	1-517-075-00	s SOCKET, LAMP
207	1-518-411-00	s LAMP
208	Δ1-532-284-00	s FUSE, TIME-LAG 0.63A 250V (AE)
209	Δ1-532-285-00	s FUSE, TIME-LAG 1.25A 250V (J, UC)
210	Δ1-532-325-00	s FUSE, TIME-LAG 6.3A 250V
211	Δ1-532-598-00	s FUSE, GLASS TUBE 4A 250V
212	1-533-188-11	s HOLDER, FUSE
213	1-570-117-41	s SWITCH, ROCKER (AC POWER)
214	1-570-173-11	s SWITCH, VOLTAGE SELECTOR
215	1-633-015-11	o PRINTED CIRCUIT BOARD, LP-53
216	1-633-551-11	o PRINTED CIRCUIT BOARD, CN-451
217	2-280-622-11	o SUPPORT (M3), HEXAGON
218	2-359-909-01	o TUBE (A), HEAT SINK RUBBER
219	3-512-114-00	s BUSH
220	3-688-814-11	s CAP, SWITCH
221	3-692-358-02	o HINGE
222	3-692-448-01	o TUBE (B), HEAT SINK RUBBER
223	3-692-536-02	o COVER (A), TALLY
224	3-692-537-02	o COVER (B), TALLY
225	3-692-538-01	o RETAINER, TALLY COVER
226	3-692-539-01	o HOLDER, TALLY
227	3-692-540-01	o HINGE
228	3-692-541-02	o COVER (1), REAR, TALLY
229	3-166-450-02	o COVER (L), TALLY
230	3-692-547-01	o PIN, PARALLEL
231	3-698-120-01	o TUBE, SHIELD
232	3-740-829-01	o SUPPORT, HEXAGON
233	3-740-839-01	o BRACKET, FUSE
234	3-740-849-01	o SHEET, INSULATING
235	3-740-850-01	o RETAINER, TRANSISTOR
236	3-740-853-02	o COVER, POWER (J, UC)
237	3-740-853-12	o COVER, POWER (AE)
238	3-740-857-01	o PARTITION (1)
239	3-740-880-01	o SHEET, BLIND, TIMER SW
240	3-741-724-01	o HEAT SINK (TO-126)
241	1-102-363-00	s CAP, CERAMIC 1000PF
242	1-506-481-11	o CONNECTOR 2P
243	1-636-289-11	o PRINTED CIRCUIT BOARD, CN-522
244	3-657-841-51	o SPACER 2X6
245	3-166-751-01	o RUBBER, SHIELD
246	3-166-752-02	o PLATE, SHIELD TRANSFORMER
247	2-832-004-00	s WASHER (YC-100), INSULATING
248	3-168-031-01	o SHEET, RADIATION

LEFT SIDE PANEL BLOCK

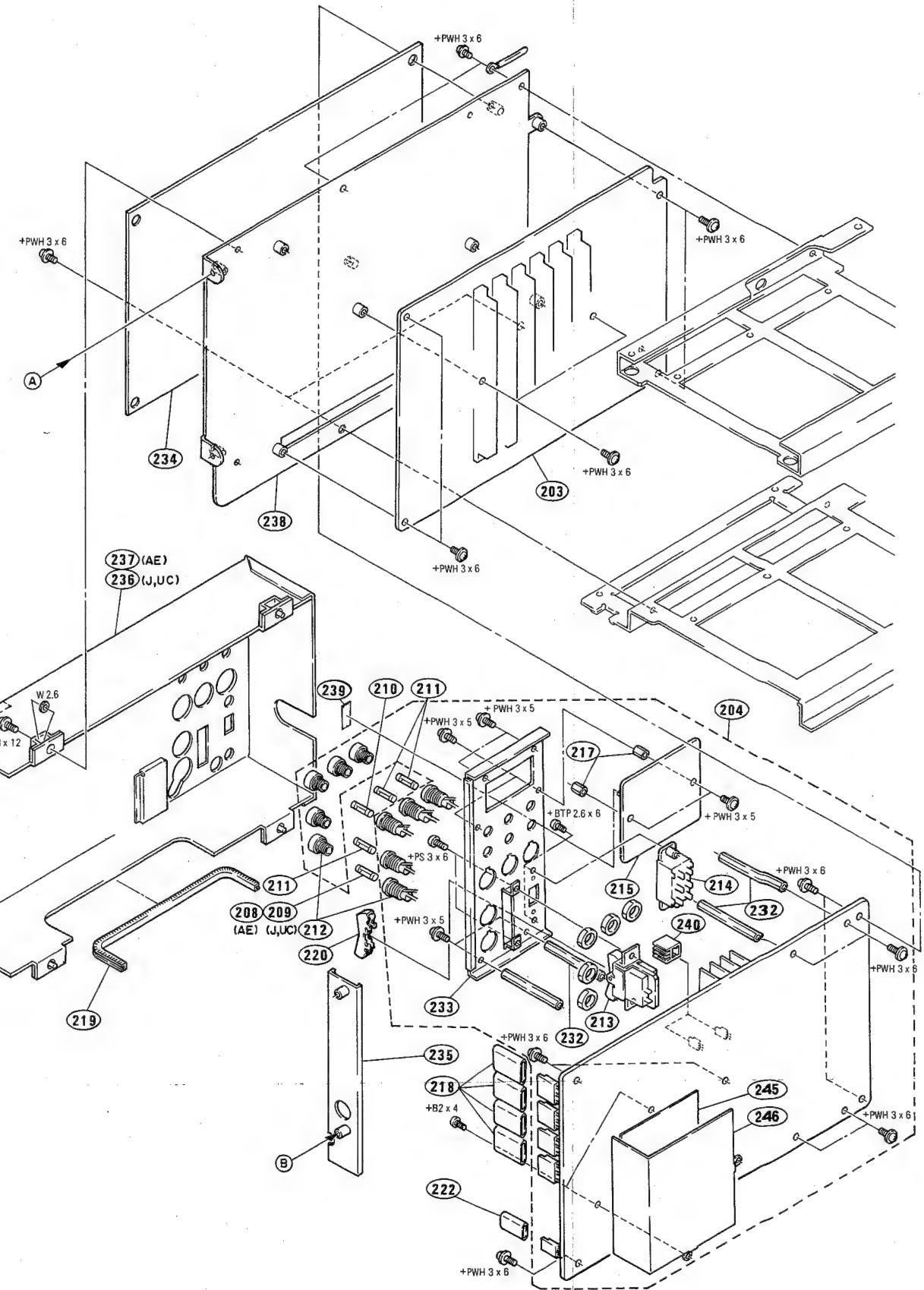
LEFT SIDE PANEL BLOCK

LEFT SIDE PANEL BLOCK

LEFT PANEL ASSY
FUSE PANEL ASSY



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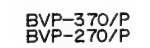


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BVP-370/P
BVP-270/P

SWITCH REAR PANEL ASSY
INCOM PANEL ASSY

REAR PANEL BLOCK



DDDD

REAR PANEL BLOCK

No.	Part No.	SP Description
301	X-3165-625-1	s KNOB ASSY, VOLUME (BVP-370)
302	X-3165-620-1	s KNOB (2) ASSY, CONTROL
303	X-3740-810-1	o GUIDE ASSY, SWITCH
304	1-224-981-41	s RES. VAR, CERMET 5K "H-POS1" "V-POS1" "WIDTH" "HEIGHT"
305	1-238-214-21	s RES. VAR, CARBON 10K
306	1-554-355-00	s SWITCH, TOGGLE "CENTER MARKER" "SAFETY ZONE" "MIX VF" "UP TALLY"
307	1-554-770-11	s SWITCH, TOGGLE "DISPLAY"
308	1-570-142-11	s SWITCH, PUSH "FILTER LOCAL"
309	1-570-170-12	s SWITCH, PUSH (2 KEY) "RET 1, RET 2"
310	1-570-171-12	s SWITCH, PUSH (1 KEY) "CURSOR"
311	1-570-296-21	s SWITCH, TOGGLE
312	1-572-196-11	s SWITCH, ROTARY "CC, ND"
313	1-572-197-11	s SWITCH, PUSH (1 KEY) "CALL"
314	1-572-204-11	s SWITCH, PUSH (3 KEY) "R G B"
315	1-572-205-21	s SWITCH, TOGGLE (BVP-370P:AE)
316	1-632-987-11	o PRINTED CIRCUIT BOARD, SW-386
317	1-632-988-11	o PRINTED CIRCUIT BOARD, SW-387
318	1-632-989-11	o PRINTED CIRCUIT BOARD, SW-388
319	1-632-990-11	o PRINTED CIRCUIT BOARD, SW-417
320	1-633-014-11	o PRINTED CIRCUIT BOARD, SW-389
321	2-270-607-00	s RING, GUARD
322	2-280-622-41	o SUPPORT (M3), HEXAGON
323	2-391-520-00	o BOLT (M5X15), HOLE, HEXAGON
324	2-391-520-21	s BOLT (M5X12), HOLE, HEXAGON
325	3-673-018-11	s SCREW, BLIND
326	3-692-320-01	o BUTTON
327	3-692-321-01	o BUTTON
328	3-692-322-01	o BUTTON
329	3-692-324-01	o BUTTON
330	3-692-325-01	o BUTTON
331	3-692-326-01	o BUTTON
332	3-692-449-01	o GUIDE, LENS BAR (J)
333	3-701-510-00	o SET SCREW, DOUBLE POINT 4X4
334	3-729-007-01	o PLATE, ORNAMENTAL, TOGGLE SW
335	3-740-806-01	o SUPPORT (R), HANDLE (J)
336	3-740-809-01	o GUIDE (J)
337	3-740-810-01	o GUIDE (REAR) (J)
338	3-740-812-01	o SUPPORT (LEFT), HANDLE (J)
339	3-740-814-01	o SHAFT
340	3-740-815-21	o PIPE, HANDLE (J)
341	3-173-303-21	o COVER, PIPE (J)
342	3-740-817-01	o ESCUTCHEON, PIPE
343	3-740-844-01	o BRACKET, INCOME VR
344	3-740-845-01	o PANEL (1), INCOME (BVP-370P:AE)
345	3-740-846-01	o PANEL (2), INCOME
346	3-740-855-02	o BRACKET, SWITCH
347	3-740-856-01	o PANEL (2), SWITCH
348	3-740-865-13	o CHASSIS (R)
349	3-740-869-01	o PANEL (3), INCOM (BVP-270)
350	3-741-747-01	o TABLE, HANDLE (J)
351	8-719-907-03	s DIODE BD703G "POWER"
352	3-741-789-01	o SPACER (J)
353	3-741-790-01	o CAP, BLIND (UC, AE)
354	3-173-304-01	o RING, STOPPER

TOP PANEL BLOCK

No.	Part No.	SP Description
401	X-3692-315-3	o RETAINER ASSY. PAN BASE
402	X-3740-801-2	o STOPPER ASSY. SIDE PLATE
403	X-3740-804-1	o HANDLE ASSY (UC, AE)
404	1-562-989-11	s CONNECTOR, MULTI 25P FEMALE
405	1-945-163-11	o HARNESS (VF)
406	2-083-308-00	s SPRING
407	2-391-520-21	s BOLT (M5X12), HOLE, HEXAGON
408	3-127-111-00	o SPRING
409	3-634-355-00	s SPRING
410	3-641-622-00	s SPRING, COMPRESSION
411	3-676-081-02	o CUSHION, TC
412	3-692-327-03	o PIN (JOINT)
413	3-692-328-01	o SPACER (JOINT)
414	3-692-329-01	o LEVER (A) (JOINT)
415	3-692-330-01	o LEVER (B) (JOINT)
416	3-692-332-01	o PLATE (A)
417	3-692-363-02	o GUARD, HARNESS
418	3-692-365-02	o PLATE, BLIND
419	3-692-370-01	o COVER, LEVER (A)
420	3-692-371-01	o COVER, LEVER (B)
421	3-692-465-02	o SHOE, SLIDE
422	3-692-468-01	o RETAINER, PAN BASE
423	3-692-470-04	o RETAINER
424	3-692-471-01	o PLATE, STOPPER
425	3-692-532-01	o SCREW (WP) (M5X5), HOLE
426	3-692-548-02	o PLATE (RIGHT), BLIND
427	3-692-549-02	o PLATE (LEFT), BLIND
428	3-692-553-01	o RING, O
429	3-698-120-01	o TUBE, SHIELD
430	3-701-439-21	s WASHER
431	3-701-510-00	s SET SCREW, DOUBLE POINT 4X4
432	3-701-511-00	s SET SCREW, DOUBLE POINT 4X6
433	3-725-907-01	s BUSHING, BLIND (UC, AE)
434	3-729-605-01	o CLIP, TREE (J)
435	3-740-818-01	o PIN, PAN STOPPER
436	3-740-819-01	o RING, PAN BASE RETAINER
437	3-740-820-02	o LEVER, LOCK
438	3-740-859-01	o RAIL, PC BOARD
439	3-740-860-01	o TABLE, RAIL
440	3-740-864-01	o CHASSIS, T
441	3-741-728-01	o LABEL, PC BOARD
442	3-741-773-01	o EDGING, RUBBER
443	3-887-632-00	s SPRING (DRUM)
444	9-911-851-XX	o PAD, BRAKE
445	3-166-820-01	s RUBBER, VF

TOP PANEL ASSY
HANDLE ASSY



CHASSIS BLOCK (1)

No.	Part No.	SP Description
501	A-7515-063-A	o MOUNTED CIRCUIT BOARD, PS-192
502	A-7515-064-A	o MOUNTED CIRCUIT BOARD, VA-86 Ser.No BVP-370 Up To 10500 (UC) BVP-270 Up To 10400 (UC) Up To 30400 (J) Up To 30200 (J) Up To 40600 (AE) Up To 40100 (AE)
	A-7515-064-B	o MOUNTED CIRCUIT BOARD, VA-86 Ser.No BVP-370 10501 - (UC) BVP-270 10401 - (UC) 30401 - (J) 30201 - (J) 40601 - (AE) 40101 - (AE)
503	A-7515-065-A	o MOUNTED CIRCUIT BOARD, IE-26 (BVP-370:J, UC)
504	A-7515-066-A	o MOUNTED CIRCUIT BOARD, IE-26P (BVP-370P:AE)
505	A-7515-067-A	o MOUNTED CIRCUIT BOARD, PR-130
506	A-7515-068-A	o MOUNTED CIRCUIT BOARD, MS-33 (BVP-370) Ser.No Up to 41125 : BVP-370P(AE)
	A-7515-322-A	o MOUNTED CIRCUIT BOARD, MS-33P Ser.No 41201 - :BVP-370P(AE)
507	A-7515-069-A	o MOUNTED CIRCUIT BOARD, SG-167 (BVP-370, BVP-270:J, UC)
508	A-7515-070-A	o MOUNTED CIRCUIT BOARD, SG-167P (BVP-370P:AE)
509	A-7515-071-A	o MOUNTED CIRCUIT BOARD, AU-129 (BVP-370:J, UC)
510	A-7515-072-A	o MOUNTED CIRCUIT BOARD, AU-129P (BVP-370P:AE)
511	A-7515-073-A	o MOUNTED CIRCUIT BOARD, FL-89
512	A-7515-074-A	o MOUNTED CIRCUIT BOARD, AT-54
513	A-7515-075-A	o MOUNTED CIRCUIT BOARD, MD-67
514	A-7515-098-A	o MOUNTED CIRCUIT BOARD, IE-26A (BVP-270:J, UC)
515	A-7515-099-A	o MOUNTED CIRCUIT BOARD, IE-26AP (BVP-270P:AE)
516	A-7515-100-A	o MOUNTED CIRCUIT BOARD, MS-33A (BVP-270) Ser.No Up to 40210 : BVP-270P(AE)
	A-7515-323-A	o MOUNTED CIRCUIT BOARD, MS-33AP Ser.No 40301 - : BVP-270P(AE)
517	A-7515-101-A	o MOUNTED CIRCUIT BOARD, SG-167AP (BVP-270P:AE)
518	A-7515-102-A	o MOUNTED CIRCUIT BOARD, AU-129A (BVP-270)
519	X-3740-803-1	o PLATE ASSY, SHIELD
520	X-3740-807-1	o CHASSIS (B) ASSY
521	1-575-400-11	o CABLE ASSY, RF
522	2-251-622-00	o LEVER, PC BOARD
523	2-391-520-21	s BOLT (M5X12), HOLE, HEXAGON
524	3-657-705-00	s BOLT (M4X40), HEXAGON HOLE
525	3-673-018-11	s SCREW, BLIND
526	3-676-125-00	o PIN, STOPPER
527	3-701-510-00	s SET SCREW, DOUBLE POINT 4X4
528	3-725-907-01	s BUSHING, BLIND (UC, AE)
529	X-3615-368-1	o FOOT, REAR ASSY (J)
531	X-3615-370-1	o FOOT (L), FRONT ASSY (J)
532	X-3615-369-1	o FOOT (R), FRONT ASSY (J)
533	3-740-815-01	o PIPE, HANDLE
534	3-173-303-01	o COVER, PIPE
535	3-740-817-01	o ESCUTCHEON, PIPE
536	3-740-825-01	o NUT, PLATE
537	3-740-847-01	o LID, POWER CASE
538	3-740-848-01	o CASE, POWER
539	3-740-858-01	o PARTITION (2)
540	3-740-859-01	o RAIL, PC BOARD
541	4-911-234-01	o EDGING
542	3-173-304-01	o RING, STOPPER

CHASSIS BLOCK (2)

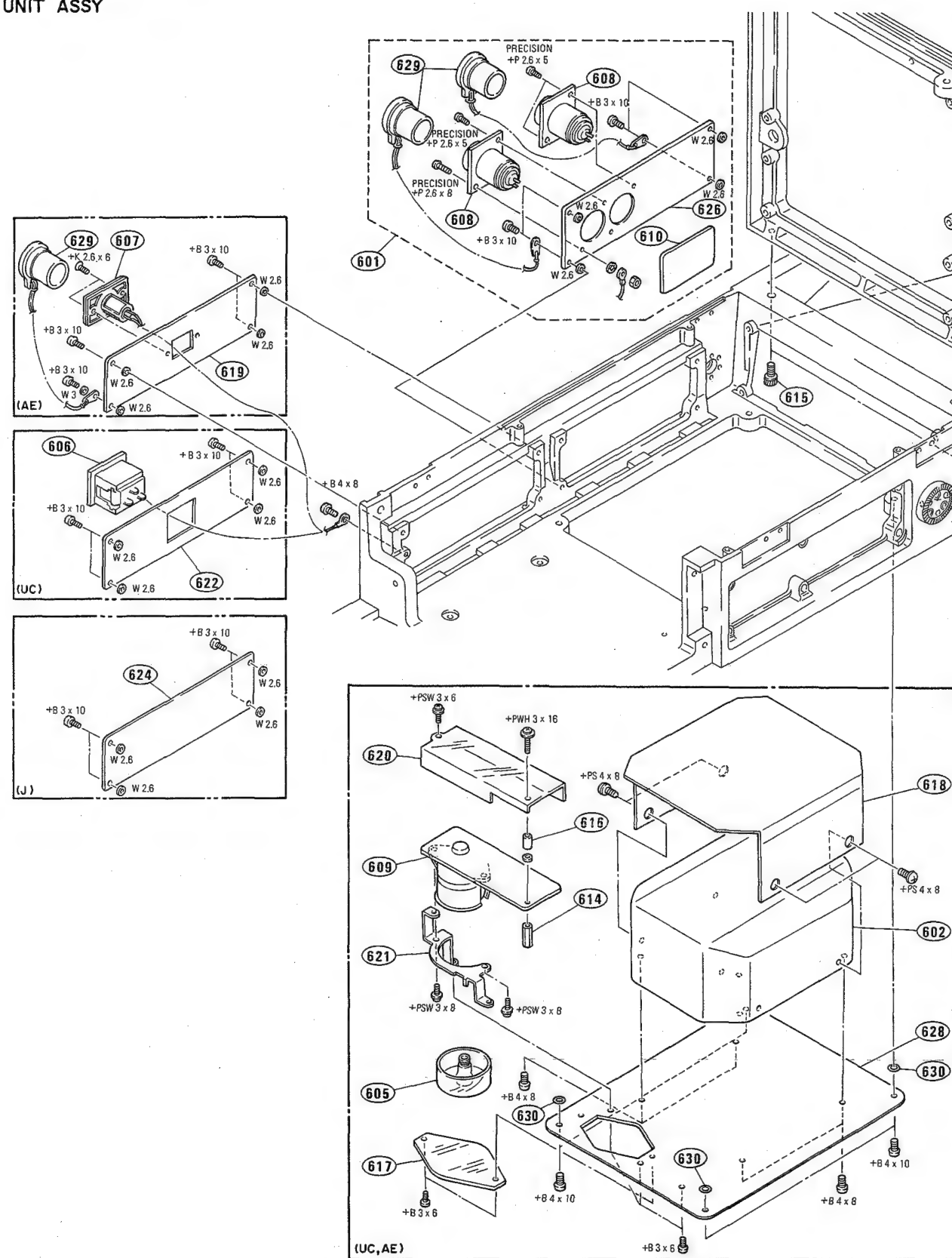
No.	Part No.	SP Description
601	A-7603-131-A	o PANEL ASSY, BNC
602	1-448-209-12	s TRANSFORMER, POWER (UC, AE)
603	1-507-676-00	s JACK, PHONE "INCOM PGM" (J, AE)
604	1-509-186-31	s CONNECTOR 5P FEMALE "INCOM PGM"
605	1-526-572-00	s SOCKET, POWER VOLTAGE SELECT(UC, AE)
606	1-526-820-11	s OUTLET, AC 3P, MALE "AC OUT" (UC)
607	1-562-889-11	s CONNECTOR, AC 3P MALE "AC OUT" (AE)
608	1-569-253-21	s CONNECTOR, BNC MALE "MONITOR OUT" "PROMPT OUT"
609	1-626-818-11	o PRINTED CIRCUIT BOARD, CN-261 (UC, AE)
610	1-632-986-11	o PRINTED CIRCUIT BOARD, CN-391
611	2-128-245-01	o PLATE (XLR), PHONE
612	2-128-255-01	o INSULATOR, PHONE (J, AE)
613	2-128-256-01	o BRACKET, PHONE (J, AE)
614	2-280-622-81	o SUPPORT (M3), HEXAGON
615	2-391-520-21	s BOLT (M5X12), HOLE, HEXAGON
616	3-657-842-31	o SPACER (3X7.5) (UC, AE)
617	3-692-439-01	s COVER, POWER SELECTION (UC, AE)
618	3-698-102-01	o PLATE, SHIELD, AC UNIT (UC, AE)
619	3-698-132-01	o PANEL (3), CONNECTOR (AE)
620	3-698-138-01	o INSULATOR (UC, AE)
621	3-698-139-01	o BRACKET (UC, AE)
622	3-698-158-01	o PANEL (2), CONNECTOR (UC)
623	3-729-613-01	o LID, BOTTOM (J)
624	3-729-618-01	o PANEL, BLIND (J)
625	3-740-840-01	o PANEL (1), RB (BVP-370)
626	3-740-842-01	o PANEL (1), CONNECTOR
627	3-740-870-01	o PANEL(2), RB (BVP-270)
628	3-741-720-01	o PLATE, AC UNIT (UC, AE)
629	3-741-726-01	o CAP (2), XLR
630	4-876-374-02	o RING, O

CHASSIS BLOCK(2)

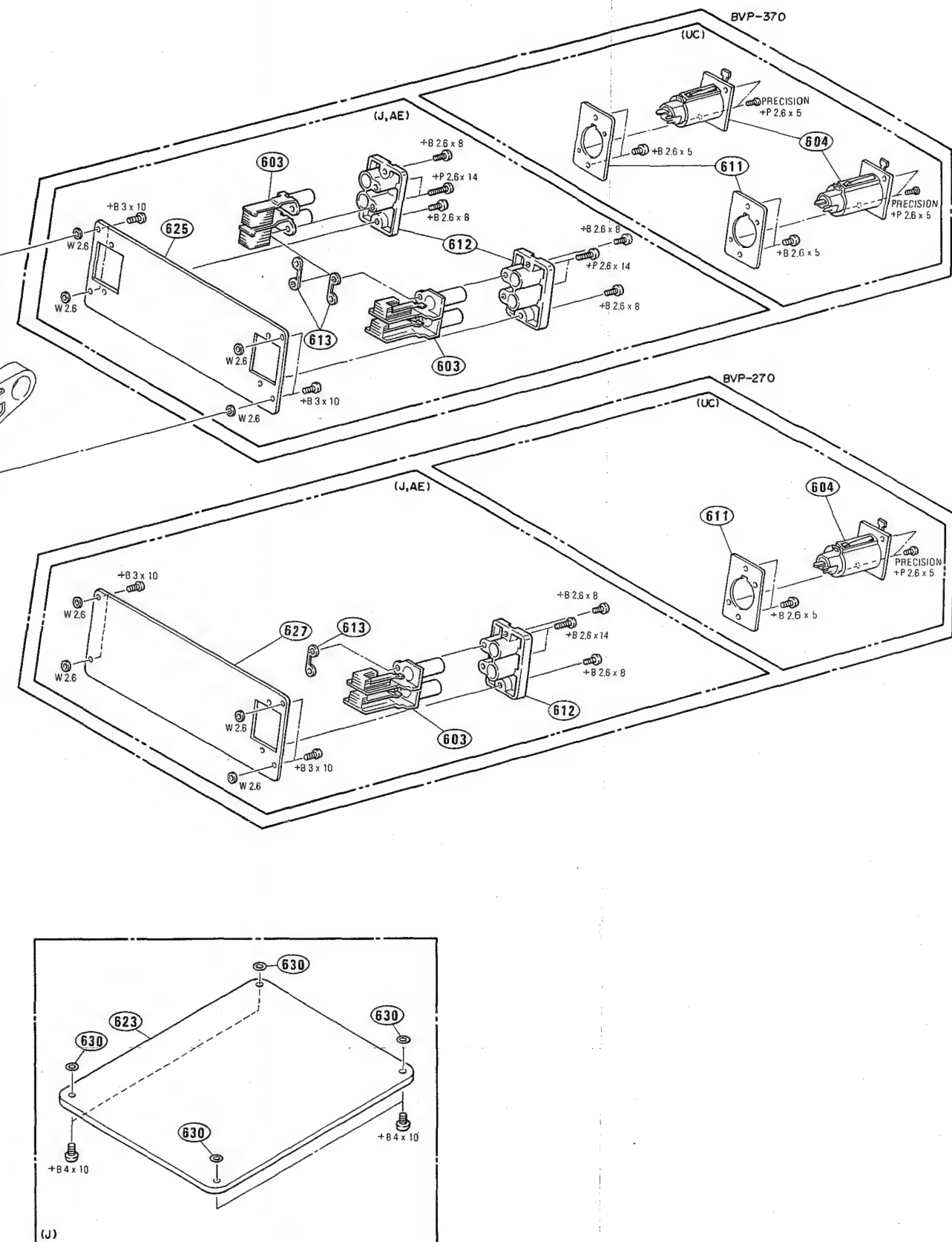
CHASSIS BLOCK(2)

CHASSIS BLOCK(2)

CONNECTOR PANEL ASSY
AC UNIT ASSY



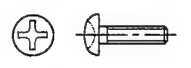
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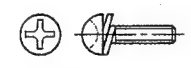


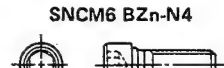
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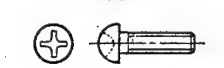
BVP-370/P
BVP-270/P

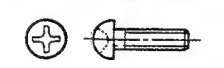
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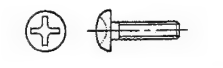
+B Bzn-N	
	
7-621-□□□-□□	
Size	Parts No.
2 × 3	772-00
× 4	772-10
× 5	772-20
× 6	772-30
× 8	772-40
× 10	772-50
× 12	772-60
× 14	772-70
× 16	772-80
× 20	—
2.6 × 3	775-00
× 4	775-10
× 5	775-20
× 6	773-95
× 8	775-40
× 10	775-50
× 12	775-60
× 14	775-70
× 16	775-80
× 20	775-90

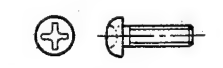
+PS Czn-N	
	
7-628-□□□-□□	
Size	Parts No.
2 × 4	255-20
× 5	283-00
× 6	255-40
× 8	255-50
× 10	283-10
× 12	283-70
2.6 × 4	284-00
× 5	284-10
× 6	284-20
× 8	284-30
× 10	284-40
× 12	259-70
× 14	259-80
× 16	260-00
× 20	260-20


BOLT, HEXAGON SOCKET SNCM6 BZn-N4	
	
7-683-□□□□-□□	
SIZE	Parts No.
3 × 4	401-04
3 × 5	402-04
3 × 6	403-04
3 × 8	404-04
3 × 10	405-04
3 × 12	406-04
3 × 14	407-04
3 × 16	408-04
3 × 20	410-04
4 × 5	417-04
4 × 6	418-04
4 × 8	419-04
4 × 10	420-04
4 × 12	421-04
4 × 14	422-04
4 × 16	423-04
4 × 20	425-04
4 × 25	427-04
5 × 8	434-04
5 × 10	435-04
5 × 12	436-04
5 × 14	437-04
5 × 16	438-04
5 × 20	440-04
5 × 25	442-04
5 × 30	444-04
5 × 50	447-04
6 × 10	452-04
6 × 12	453-04
6 × 14	454-04
6 × 16	455-04
6 × 20	457-04
6 × 25	459-04
6 × 30	461-04
6 × 35	463-04
6 × 40	465-04
6 × 45	466-04
6 × 55	468-04
8 × 12	470-04
8 × 14	471-04
8 × 16	472-04
8 × 20	473-04
8 × 25	474-04
8 × 30	475-04
8 × 35	476-04
8 × 40	477-04
8 × 45	478-04
8 × 50	479-04


PRECISION +P Bzn-N	
	
7-627-□□□□-□□	
SIZE	Parts No.
1.7 × 1.6	552-18
× 1.8	—
× 2	552-28
× 2.2	—
× 2.5	552-08
× 2.8	—
× 3	552-38
× 3.5	552-78
× 4	552-48
× 4.5	—
× 5	552-58
× 5.5	—
× 6	—
2 × 1.8	554-38
× 2	553-18
× 2.2	—
× 2.5	553-28
× 2.8	554-58
× 3	553-38
× 3.5	554-18
× 4	553-48
× 4.5	553-58
× 5	554-28
× 5.5	—
× 6	553-68
× 7	553-88
× 8	553-98
× 10	553-78
2.6 × 2.8	556-08
× 3	—
× 3.5	556-28
× 4	556-38
× 4.5	556-48
× 5	556-58
× 5.5	—
× 6	556-78
× 7	—
× 8	—
× 9	—
× 10	—


PRECISION +P Cr-N	
	
7-627-□□□□-□□	
SIZE	Parts No.
1.7 × 1.6	—
× 1.8	—
× 2	552-27
× 2.2	552-87
× 2.5	552-07
× 2.8	—
× 3	552-37
× 3.5	—
× 4	552-47
× 4.5	552-67
× 5	552-57
× 5.5	557-07
× 6	552-77
2 × 1.8	554-37
× 2	553-17
× 2.2	554-07
× 2.5	553-27
× 2.8	—
× 3	553-37
× 3.5	554-17
× 4	553-47
× 4.5	553-57
× 5	553-67
× 5.5	—
× 6	554-27
× 7	553-87
× 8	553-97
× 10	553-77
2.6 × 2.8	556-07
× 3	—
× 3.5	—
× 4	556-37
× 4.5	—
× 5	556-57
× 5.5	—
× 6	556-77
× 7	—
× 8	556-97
× 9	—
× 10	557-47

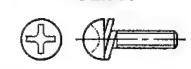
+B Cr-N	
	
7-682-□□□□-□□	
Size	Parts No.
3 × 3	544-04
× 4	545-04
× 5	546-04
× 6	547-04
× 8	548-04
× 10	549-04
× 12	550-04
× 14	551-04
× 16	552-04
× 20	553-04
4 × 4	558-04
× 5	559-04
× 6	560-04
× 8	561-04
× 10	562-04
× 12	563-04
× 14	564-04
× 16	565-04
× 20	566-04
× 25	567-04
× 30	568-04
× 35	569-04
× 40	570-04
× 45	571-04
× 50	572-04
5 × 8	574-04
× 10	575-04
× 12	576-04
× 14	577-04
× 16	578-04
× 20	579-04
× 25	580-04
× 30	581-04

+B Bzn-N	
	
7-682-□□□□-□□	
SIZE	Parts No.
3 × 3	544-09
× 4	545-09
× 5	546-09
× 6	547-09
× 8	548-09
× 10	549-09
× 12	550-09
× 14	551-09
× 16	552-09
× 20	553-09
× 30	555-09
4 × 4	558-09
× 5	559-09
× 6	560-09
× 8	561-09
× 10	562-09
× 12	563-09
× 14	564-09
× 16	565-09
× 20	566-09
5 × 8	574-09
× 10	575-09
× 12	576-09
× 14	577-09
× 16	578-09
× 20	579-09

+PSW Czn-N	
	
7-682-□□□□-□□	
SIZE	Parts No.
3 × 6	947-01
× 8	948-01
× 10	949-01
× 12	950-01
× 14	951-01
× 16	952-01
× 20	953-01
× 25	954-01
× 30	955-01
× 35	956-01
× 40	957-01
4 × 8	961-01
× 10	962-01
× 12	963-01
× 14	964-01
× 16	965-01
× 20	966-01
× 25	967-01
× 30	968-01
× 35	969-01
× 40	970-01

+PWH	
	
7-682-□□□□-□□	
SIZE	Parts No.
2.6 × 4	—
× 5	902-11
× 6	902-21
× 8	902-31
× 10	—
× 12	902-51
× 14	—
3 × 5	903-01
× 6	903-11
× 8	903-21
× 10	903-31
× 12	903-41
× 14	—
4 × 6	904-01
× 8	904-11
× 10	904-21
× 12	904-31
× 14	904-41
× 16	—
× 20	—

+K Cr-N	
	
7-682-□□□□-□□	
SIZE	Parts No.
3 × 4	245-04
× 5	246-04
× 6	247-04
× 8	248-04
× 10	249-04
× 12	250-04
× 14	251-04
× 16	252-04
× 20	253-04
4 × 6	260-04
× 8	261-04
× 10	262-04
× 12	263-04
× 14	264-04
× 16	265-04
× 20	266-04

+PS Czn-N	
	
7-682-□□□□-□□	
Size	Parts No.
3 × 5	646-01
× 6	647-01
× 8	648-01
× 10	649-01
× 12	650-01
× 14	651-01
× 16	652-01
× 20	653-01
4 × 6	660-01
× 8	661-01
× 10	662-01
× 12	663-01
× 14	664-01
× 16	665-01
× 20	666-01

ELECTRICAL PARTS LIST

CAPACITOR, TANTALUM

Part No. SP Description

1-131-396-00	s	CAP, TANTALUM	0.01	20%	35V
1-131-397-00	s	CAP, TANTALUM	0.015	20%	35V
1-131-398-00	s	CAP, TANTALUM	0.022	20%	35V
1-131-399-00	s	CAP, TANTALUM	0.033	20%	35V
1-131-400-00	s	CAP, TANTALUM	0.047	20%	35V

1-131-401-00	s	CAP, TANTALUM	0.068	10%	35V
1-131-341-00	s	CAP, TANTALUM	0.1	10%	35V
1-131-342-00	s	CAP, TANTALUM	0.15	10%	35V
1-131-343-00	s	CAP, TANTALUM	0.22	10%	35V
1-131-344-00	s	CAP, TANTALUM	0.33	10%	35V

1-131-412-00	s	CAP, TANTALUM	0.47	20%	20V
1-131-345-00	s	CAP, TANTALUM	0.47	10%	35V
1-131-410-00	s	CAP, TANTALUM	0.68	20%	25V
1-131-587-11	s	CAP, TANTALUM	0.68	10%	35V
1-131-413-00	s	CAP, TANTALUM	1.0	20%	20V

1-131-347-00	s	CAP, TANTALUM	1.0	10%	35V
1-131-416-00	s	CAP, TANTALUM	1.5	20%	16V
1-131-348-00	s	CAP, TANTALUM	1.5	10%	35V
1-131-419-00	s	CAP, TANTALUM	2.2	20%	10V
1-131-361-00	s	CAP, TANTALUM	2.2	10%	20V

1-131-349-00	s	CAP, TANTALUM	2.2	10%	35V
1-131-422-00	s	CAP, TANTALUM	3.3	20%	6.3V
1-131-368-00	s	CAP, TANTALUM	3.3	10%	16V
1-131-356-00	s	CAP, TANTALUM	3.3	10%	25V
1-131-350-00	s	CAP, TANTALUM	3.3	10%	35V

1-131-425-00	s	CAP, TANTALUM	4.7	20%	3.15V
1-131-375-00	s	CAP, TANTALUM	4.7	10%	10V
1-131-363-00	s	CAP, TANTALUM	4.7	10%	20V
1-131-351-00	s	CAP, TANTALUM	4.7	10%	35V
1-131-382-00	s	CAP, TANTALUM	6.8	10%	6.3V

1-131-370-00	s	CAP, TANTALUM	6.8	10%	16V
1-131-358-00	s	CAP, TANTALUM	6.8	10%	25V
1-131-352-00	s	CAP, TANTALUM	6.8	10%	35V
1-131-389-00	s	CAP, TANTALUM	10	10%	3.15V
1-131-377-00	s	CAP, TANTALUM	10	10%	10V

1-131-365-00	s	CAP, TANTALUM	10	10%	20V
1-131-353-00	s	CAP, TANTALUM	10	10%	35V
1-131-384-00	s	CAP, TANTALUM	15	10%	6.3V
1-131-372-00	s	CAP, TANTALUM	15	10%	16V
1-131-360-00	s	CAP, TANTALUM	15	10%	25V

1-131-391-00	s	CAP, TANTALUM	22	10%	3.15V
1-131-379-00	s	CAP, TANTALUM	22	10%	10V
1-131-367-00	s	CAP, TANTALUM	22	10%	20V
1-131-386-00	s	CAP, TANTALUM	33	10%	6.3V
1-131-374-00	s	CAP, TANTALUM	33	10%	16V

1-131-393-00	s	CAP, TANTALUM	47	10%	3.15V
1-131-381-00	s	CAP, TANTALUM	47	10%	10V
1-131-388-00	s	CAP, TANTALUM	68	10%	6.3V
1-131-395-00	s	CAP, TANTALUM	100	10%	3.15V

CAPACITOR, CERAMIC, STACKED

Part No. SP Description

1-162-757-11	s	CAP, CERAMIC	220pF	5%	50V
1-162-762-11	s	CAP, CERAMIC	560pF	5%	50V
1-162-764-11	s	CAP, CERAMIC	820pF	5%	50V
1-162-765-11	s	CAP, CERAMIC	0.001	5%	50V
1-162-769-11	s	CAP, CERAMIC	0.0022	5%	50V

1-162-777-11	s	CAP, CERAMIC	0.01	5%	50V
1-162-781-11	s	CAP, CERAMIC	0.022	5%	50V
1-162-788-11	s	CAP, CERAMIC	0.0033	10%	50V
1-162-790-11	s	CAP, CERAMIC	0.0047	10%	50V
1-162-806-11	s	CAP, CERAMIC	0.1	10%	50V

1-162-810-11	s	CAP, CERAMIC	0.22	10%	50V
1-162-812-11	s	CAP, CERAMIC	0.33	10%	50V

CAPACITOR, CERAMIC, STACKED

Part No. SP Description

1-161-883-11	s	CAP, CERAMIC	0.0015	50V
1-161-884-11	s	CAP, CERAMIC	0.0022	50V
1-161-885-11	s	CAP, CERAMIC	0.0033	50V
1-161-886-11	s	CAP, CERAMIC	0.0047	50V
1-161-887-11	s	CAP, CERAMIC	0.0068	50V

1-161-888-11	s	CAP, CERAMIC	0.01	50V
1-161-889-11	s	CAP, CERAMIC	0.015	50V
1-161-890-11	s	CAP, CERAMIC	0.022	50V
1-161-891-11	s	CAP, CERAMIC	0.033	50V
1-161-892-11	s	CAP, CERAMIC	0.047	50V

1-161-893-11	s	CAP, CERAMIC	0.068	50V
1-161-485-00	s	CAP, CERAMIC	0.1	50V
1-161-895-11	s	CAP, CERAMIC	0.15	50V
1-161-896-11	s	CAP, CERAMIC	0.22	50V
1-161-897-11	s	CAP, CERAMIC	0.33	50V

1-161-898-11	s	CAP, CERAMIC	0.47	50V
1-161-899-11	s	CAP, CERAMIC	0.68	50V
1-161-900-11	s	CAP, CERAMIC	1.0	50V

CAPACITOR, CHIP CERAMIC

Part No. SP Description

1-163-083-00	s	CAP, CHIP CERAMIC	1pF	+-0.25pF	50V
1-163-085-00	s	CAP, CHIP CERAMIC	2pF	+-0.25pF	50V
1-163-087-00	s	CAP, CHIP CERAMIC	4pF	+-0.25pF	50V
1-163-089-00	s	CAP, CHIP CERAMIC	6pF	+-0.5pF	50V
1-163-091-00	s	CAP, CHIP CERAMIC	8pF	+-0.5pF	50V
1-163-093-00	s	CAP, CHIP CERAMIC	10pF	5%	50V
1-163-097-00	s	CAP, CHIP CERAMIC	15pF	5%	50V
1-163-101-00	s	CAP, CHIP CERAMIC	22pF	5%	50V
1-163-105-00	s	CAP, CHIP CERAMIC	33pF	5%	50V
1-163-109-00	s	CAP, CHIP CERAMIC	47pF	5%	50V
1-163-113-00	s	CAP, CHIP CERAMIC	68pF	5%	50V
1-163-117-00	s	CAP, CHIP CERAMIC	100pF	5%	50V
1-163-121-00	s	CAP, CHIP CERAMIC	150pF	5%	50V
1-163-125-00	s	CAP, CHIP CERAMIC	220pF	5%	50V
1-163-129-00	s	CAP, CHIP CERAMIC	330pF	5%	50V
1-163-133-00	s	CAP, CHIP CERAMIC	470pF	5%	50V
1-163-137-00	s	CAP, CHIP CERAMIC	680pF	5%	50V
1-163-141-00	s	CAP, CHIP CERAMIC	1000pF	5%	50V
1-163-145-00	s	CAP, CHIP CERAMIC	1500pF	10%	50V
1-164-161-11	s	CAP, CHIP CERAMIC	2200pF	10%	100V
1-164-182-11	s	CAP, CHIP CERAMIC	3300pF	10%	100V
1-163-017-00	s	CAP, CHIP CERAMIC	4700pF	10%	50V
1-163-019-00	s	CAP, CHIP CERAMIC	6800pF	10%	50V
1-164-232-11	s	CAP, CHIP CERAMIC	0.01	20%	100V
1-163-023-00	s	CAP, CHIP CERAMIC	0.015	10%	50V
1-163-034-00	s	CAP, CHIP CERAMIC	0.033		50V
1-163-035-00	s	CAP, CHIP CERAMIC	0.047		50V
1-163-036-00	s	CAP, CHIP CERAMIC	0.068		50V
1-163-038-00	s	CAP, CHIP CERAMIC	0.1		50V

INDUCTOR, MICRO

Part No. SP Description

1-408-876-00	s	INDUCTOR, MICRO	0.18	5%
1-408-877-00	s	INDUCTOR, MICRO	0.22	5%
1-408-878-00	s	INDUCTOR, MICRO	0.33	5%
1-408-879-21	s	INDUCTOR, MICRO	0.47	5%
1-408-931-00	s	INDUCTOR, MICRO	0.56	5%
1-408-880-00	s	INDUCTOR, MICRO	0.68	5%
1-408-763-00	s	INDUCTOR, MICRO	0.82	5%
1-408-397-00	s	INDUCTOR, MICRO	1.0	5%
1-408-398-00	s	INDUCTOR, MICRO	1.2	5%
1-408-399-00	s	INDUCTOR, MICRO	1.5	5%
1-408-400-00	s	INDUCTOR, MICRO	1.8	5%
1-408-401-00	s	INDUCTOR, MICRO	2.2	5%
1-408-402-00	s	INDUCTOR, MICRO	2.7	5%
1-408-403-00	s	INDUCTOR, MICRO	3.3	5%
1-408-404-00	s	INDUCTOR, MICRO	3.9	5%
1-408-405-00	s	INDUCTOR, MICRO	4.7	5%
1-408-406-00	s	INDUCTOR, MICRO	5.6	5%
1-408-407-00	s	INDUCTOR, MICRO	6.8	5%
1-408-408-00	s	INDUCTOR, MICRO	8.2	5%
1-408-409-00	s	INDUCTOR, MICRO	10	5%
1-408-410-00	s	INDUCTOR, MICRO	12	5%
1-408-411-00	s	INDUCTOR, MICRO	15	5%
1-408-412-00	s	INDUCTOR, MICRO	18	5%
1-408-413-00	s	INDUCTOR, MICRO	22	5%
1-408-414-00	s	INDUCTOR, MICRO	27	5%
1-408-415-00	s	INDUCTOR, MICRO	33	5%
1-408-416-00	s	INDUCTOR, MICRO	39	5%
1-408-417-21	s	INDUCTOR, MICRO	47	5%
1-408-418-00	s	INDUCTOR, MICRO	56	5%
1-408-419-00	s	INDUCTOR, MICRO	68	5%
1-408-420-00	s	INDUCTOR, MICRO	82	5%
1-408-421-00	s	INDUCTOR, MICRO	100	5%
1-408-422-00	s	INDUCTOR, MICRO	120	5%
1-408-423-00	s	INDUCTOR, MICRO	150	5%
1-408-424-00	s	INDUCTOR, MICRO	180	5%
1-408-425-00	s	INDUCTOR, MICRO	220	5%
1-408-426-00	s	INDUCTOR, MICRO	270	5%
1-408-427-00	s	INDUCTOR, MICRO	330	5%
1-408-428-00	s	INDUCTOR, MICRO	390	5%
1-408-429-00	s	INDUCTOR, MICRO	470	5%

RESISTOR, CHIP

Part No.	SP Description
1-216-295-00	s RES, CHIP 0 5% 1/10W
1-216-298-00	s RES, CHIP 2.2 5% 1/10W
1-216-302-00	s RES, CHIP 2.7 5% 1/10W
1-216-304-11	s RES, CHIP 3.3 5% 1/10W
1-216-306-11	s RES, CHIP 3.9 5% 1/10W
1-216-308-00	s RES, CHIP 4.7 5% 1/10W
1-216-309-00	s RES, CHIP 5.6 5% 1/10W
1-216-311-00	s RES, CHIP 6.8 5% 1/10W
1-216-313-00	s RES, CHIP 8.2 5% 1/10W
1-216-001-00	s RES, CHIP 10 5% 1/10W
1-216-003-11	s RES, CHIP 12 5% 1/10W
1-216-005-00	s RES, CHIP 15 5% 1/10W
1-216-007-00	s RES, CHIP 18 5% 1/10W
1-216-009-00	s RES, CHIP 22 5% 1/10W
1-216-011-00	s RES, CHIP 27 5% 1/10W
1-216-013-00	s RES, CHIP 33 5% 1/10W
1-216-015-00	s RES, CHIP 39 5% 1/10W
1-216-017-00	s RES, CHIP 47 5% 1/10W
1-216-019-00	s RES, CHIP 56 5% 1/10W
1-216-021-00	s RES, CHIP 68 5% 1/10W
1-216-023-00	s RES, CHIP 82 5% 1/10W
1-216-025-00	s RES, CHIP 100 5% 1/10W
1-216-027-00	s RES, CHIP 120 5% 1/10W
1-216-029-00	s RES, CHIP 150 5% 1/10W
1-216-031-00	s RES, CHIP 180 5% 1/10W
1-216-033-00	s RES, CHIP 220 5% 1/10W
1-216-035-00	s RES, CHIP 270 5% 1/10W
1-216-037-00	s RES, CHIP 330 5% 1/10W
1-216-039-00	s RES, CHIP 390 5% 1/10W
1-216-041-00	s RES, CHIP 470 5% 1/10W
1-216-043-00	s RES, CHIP 560 5% 1/10W
1-216-045-00	s RES, CHIP 680 5% 1/10W
1-216-047-00	s RES, CHIP 820 5% 1/10W
1-216-049-00	s RES, CHIP 1k 5% 1/10W
1-216-051-00	s RES, CHIP 1.2k 5% 1/10W
1-216-053-00	s RES, CHIP 1.5k 5% 1/10W
1-216-055-00	s RES, CHIP 1.8k 5% 1/10W
1-216-057-00	s RES, CHIP 2.2k 5% 1/10W
1-216-059-00	s RES, CHIP 2.7k 5% 1/10W
1-216-061-00	s RES, CHIP 3.3k 5% 1/10W
1-216-063-00	s RES, CHIP 3.9k 5% 1/10W
1-216-065-00	s RES, CHIP 4.7k 5% 1/10W
1-216-067-00	s RES, CHIP 5.6k 5% 1/10W
1-216-069-00	s RES, CHIP 6.8k 5% 1/10W
1-216-071-00	s RES, CHIP 8.2k 5% 1/10W
1-216-073-00	s RES, CHIP 10k 5% 1/10W
1-216-075-00	s RES, CHIP 12k 5% 1/10W
1-216-077-00	s RES, CHIP 15k 5% 1/10W
1-216-079-00	s RES, CHIP 18k 5% 1/10W
1-216-081-00	s RES, CHIP 22k 5% 1/10W
1-216-083-00	s RES, CHIP 27k 5% 1/10W
1-216-085-00	s RES, CHIP 33k 5% 1/10W
1-216-748-11	s RES, CHIP 39k 5% 1/10W
1-216-089-00	s RES, CHIP 47k 5% 1/10W
1-216-091-00	s RES, CHIP 56k 5% 1/10W

RESISTOR, CHIP

Part No.	SP Description
1-216-093-00	s RES, CHIP 68k 5% 1/10W
1-216-095-00	s RES, CHIP 82k 5% 1/10W
1-216-097-00	s RES, CHIP 100k 5% 1/10W
1-216-099-00	s RES, CHIP 120k 5% 1/10W
1-216-101-00	s RES, CHIP 150k 5% 1/10W
1-216-103-00	s RES, CHIP 180k 5% 1/10W
1-216-105-00	s RES, CHIP 220k 5% 1/10W
1-216-107-00	s RES, CHIP 270k 5% 1/10W
1-216-109-00	s RES, CHIP 330k 5% 1/10W
1-216-111-00	s RES, CHIP 390k 5% 1/10W
1-216-113-00	s RES, CHIP 470k 5% 1/10W
1-216-115-00	s RES, CHIP 560k 5% 1/10W
1-216-117-00	s RES, CHIP 680k 5% 1/10W
1-216-119-00	s RES, CHIP 820k 5% 1/10W
1-216-121-00	s RES, CHIP 1.0M 5% 1/10W
1-216-123-11	s RES, CHIP 1.2M 5% 1/10W
1-216-125-00	s RES, CHIP 1.5M 5% 1/10W
1-216-127-11	s RES, CHIP 1.8M 5% 1/10W
1-216-129-00	s RES, CHIP 2.2M 5% 1/10W
1-216-131-11	s RES, CHIP 2.7M 5% 1/10W
1-216-133-00	s RES, CHIP 3.3M 5% 1/10W

----- RESISTOR, CARBON -----

Part No. SP Description

1-249-381-11	s RES, CARBON	1.0	5%	1/6W
1-249-382-11	s RES, CARBON	1.2	5%	1/6W
1-249-383-11	s RES, CARBON	1.5	5%	1/6W
1-249-384-11	s RES, CARBON	1.8	5%	1/6W
1-249-385-11	s RES, CARBON	2.2	5%	1/6W
1-249-386-11	s RES, CARBON	2.7	5%	1/6W
1-249-387-11	s RES, CARBON	3.3	5%	1/6W
1-249-388-11	s RES, CARBON	3.9	5%	1/6W
1-249-389-11	s RES, CARBON	4.7	5%	1/6W
1-249-390-11	s RES, CARBON	5.6	5%	1/6W
1-249-391-11	s RES, CARBON	6.8	5%	1/6W
1-249-392-11	s RES, CARBON	8.2	5%	1/6W
1-249-393-11	s RES, CARBON	10	5%	1/6W
1-249-394-11	s RES, CARBON	12	5%	1/6W
1-249-395-11	s RES, CARBON	15	5%	1/6W
1-249-396-11	s RES, CARBON	18	5%	1/6W
1-249-397-11	s RES, CARBON	22	5%	1/6W
1-249-398-11	s RES, CARBON	27	5%	1/6W
1-249-399-11	s RES, CARBON	33	5%	1/6W
1-249-400-11	s RES, CARBON	39	5%	1/6W
1-249-401-11	s RES, CARBON	47	5%	1/6W
1-249-402-11	s RES, CARBON	56	5%	1/6W
1-249-403-11	s RES, CARBON	68	5%	1/6W
1-215-394-00	s RES, METAL	75	1%	1/6W
1-249-404-11	s RES, CARBON	82	5%	1/6W
1-249-405-11	s RES, CARBON	100	5%	1/6W
1-249-406-11	s RES, CARBON	120	5%	1/6W
1-249-407-11	s RES, CARBON	150	5%	1/6W
1-249-408-11	s RES, CARBON	180	5%	1/6W
1-249-409-11	s RES, CARBON	220	5%	1/6W
1-249-410-11	s RES, CARBON	270	5%	1/6W
1-249-411-11	s RES, CARBON	330	5%	1/6W
1-249-412-11	s RES, CARBON	390	5%	1/6W
1-249-413-11	s RES, CARBON	470	5%	1/6W
1-249-414-11	s RES, CARBON	560	5%	1/6W
1-249-415-11	s RES, CARBON	680	5%	1/6W
1-249-416-11	s RES, CARBON	820	5%	1/6W
1-249-417-11	s RES, CARBON	1.0k	5%	1/6W
1-249-418-11	s RES, CARBON	1.2k	5%	1/6W
1-249-419-11	s RES, CARBON	1.5k	5%	1/6W
1-249-420-11	s RES, CARBON	1.8k	5%	1/6W
1-249-421-11	s RES, CARBON	2.2k	5%	1/6W
1-249-422-11	s RES, CARBON	2.7k	5%	1/6W
1-249-423-11	s RES, CARBON	3.3k	5%	1/6W
1-249-424-11	s RES, CARBON	3.9k	5%	1/6W
1-249-425-11	s RES, CARBON	4.7k	5%	1/6W
1-249-426-11	s RES, CARBON	5.6k	5%	1/6W
1-249-427-11	s RES, CARBON	6.8k	5%	1/6W
1-249-428-11	s RES, CARBON	8.2k	5%	1/6W
1-249-429-11	s RES, CARBON	10k	5%	1/6W
1-249-430-11	s RES, CARBON	12k	5%	1/6W
1-249-431-11	s RES, CARBON	15k	5%	1/6W
1-249-432-11	s RES, CARBON	18k	5%	1/6W
1-249-433-11	s RES, CARBON	22k	5%	1/6W
1-249-434-11	s RES, CARBON	27k	5%	1/6W
1-249-435-11	s RES, CARBON	33k	5%	1/6W
1-249-436-11	s RES, CARBON	39k	5%	1/6W
1-249-437-11	s RES, CARBON	47k	5%	1/6W
1-249-438-11	s RES, CARBON	56k	5%	1/6W
1-249-439-11	s RES, CARBON	68k	5%	1/6W

----- RESISTOR, CARBON -----

Part No. SP Description

1-249-440-11	s RES, CARBON	82k	5%	1/6W
1-249-441-11	s RES, CARBON	100k	5%	1/6W
1-215-471-00	s RES, METAL	120k	1%	1/6W
1-215-473-00	s RES, METAL	150k	1%	1/6W
1-215-475-00	s RES, METAL	180k	1%	1/6W
1-215-477-00	s RES, METAL	220k	1%	1/6W
1-215-479-00	s RES, METAL	270k	1%	1/6W
1-215-481-00	s RES, METAL	330k	1%	1/6W
1-215-483-00	s RES, METAL	390k	1%	1/6W
1-215-485-00	s RES, METAL	470k	1%	1/6W
1-215-487-00	s RES, METAL	560k	1%	1/6W
1-215-489-00	s RES, METAL	680k	1%	1/6W
1-215-491-00	s RES, METAL	820k	1%	1/6W
1-215-493-00	s RES, METAL	1.0M	1%	1/6W

AT-54 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-074-A	o MOUNTED CIRCUIT BOARD, AT-54
1pc	2-251-622-00	o LEVER, PC BOARD
1pc	7-626-317-11	s PIN, SPRING 2.5X6
2pcs	7-628-254-40	s SCREW +PS 2.6X12
4pcs	7-682-902-01	s SCREW +PWH 2.6X4
C18	1-124-584-00	s ELECT 100uF 20% 10V
C62	1-163-103-00	s CERAMIC CHIP 27PF 5% 50V
C77	1-125-446-11	s DOUBLE LAYERS 0.47FARAD 5.5V
C101	1-163-127-00	s CERAMIC CHIP 270PF 5% 50V
C102	1-163-127-00	s CERAMIC CHIP 270PF 5% 50V
C103	1-163-127-00	s CERAMIC CHIP 270PF 5% 50V
C104	1-163-127-00	s CERAMIC CHIP 270PF 5% 50V
C105	1-163-127-00	s CERAMIC CHIP 270PF 5% 50V
C106	1-163-127-00	s CERAMIC CHIP 270PF 5% 50V
C107	1-163-127-00	s CERAMIC CHIP 270PF 5% 50V
CN1	1-562-730-11	o CONNECTOR, MULTI 90P, MALE
D1	8-719-921-12	s DIODE HZ2BL1
D2	8-719-118-38	s DIODE 1S746A
D3	8-719-101-61	s DIODE RD6.2EL2
D4	8-719-101-64	s DIODE RD6.8EL2
D5	8-719-800-76	s DIODE 1SS226
D6	8-719-104-31	s DIODE 1S2838
D7	8-719-101-58	s DIODE RD5.6EL2
D8	8-719-800-76	s DIODE 1SS226
D9	8-719-948-47	s DIODE HSM88AS
D10	8-719-800-76	s DIODE 1SS226
D11	8-719-104-34	s DIODE 1S2836
D13	8-719-101-97	s DIODE 1SS97-1
D14	8-719-800-76	s DIODE 1SS226
D15	8-719-104-34	s DIODE 1S2836
D16	8-719-948-47	s DIODE HSM88AS
D17	8-719-800-76	s DIODE 1SS226
D18	8-719-800-76	s DIODE 1SS226
IC1	8-759-906-54	s IC TL064CNS
IC3	8-759-201-61	s IC TC40H004F
IC4	8-759-009-07	s IC MC14053BF
IC5	8-759-009-07	s IC MC14053BF
IC6	8-759-906-53	s IC TL062CPS
IC7	8-759-906-54	s IC TL064CNS
IC8	8-759-009-07	s IC MC14053BF
IC9	8-759-906-54	s IC TL064CNS
IC10	8-759-906-54	s IC TL064CNS
IC11	8-759-204-71	s IC TC40H163F
IC12	8-759-204-71	s IC TC40H163F
IC13	8-759-201-64	s IC TC40H074F
IC14	8-759-204-69	s IC TC40H161F
IC15	8-759-239-34	s IC TC74HC4538AF
IC16	8-759-009-02	s IC MC14046BF
IC17	8-759-204-71	s IC TC40H163F
IC18	8-759-735-88	s IC 27C512G-20-P370
IC19	8-759-204-75	s IC TC40H175F
IC20	8-759-402-31	s IC MN1237A
IC21	8-759-204-90	s IC TC40H374F
IC22	8-759-201-64	s IC TC40H074F
IC23	8-759-106-58	s IC UPD700AC
IC24	8-759-910-35	s IC MSM82C55A-5GS
IC25	8-759-910-35	s IC MSM82C55A-5GS
IC26	8-759-918-65	s IC TL7700CPS

(AT-54 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC27	8-759-204-59	s IC TC40H138F
IC28	8-759-246-66	s IC TMP284C015BF-6
IC29	8-759-204-59	s IC TC40H138F
IC30	8-759-737-83	s IC 27C256A-BVP370-1.21
IC31	8-759-234-55	s IC TC5564AFL-15
IC32	8-759-994-64	s IC MB88341PF
IC33	8-759-748-05	s IC UPD28C64C-20
IC34	8-759-204-83	s IC TC40H245F
IC35	8-759-147-83	s IC CXD8071Q
IC36	8-759-910-35	s IC MSM82C55A-5GS
IC37	8-759-204-90	s IC TC40H374F
IC38	8-759-204-83	s IC TC40H245F
IC39	8-759-204-82	s IC TC40H244F
IC40	8-759-204-71	s IC TC40H163F
IC41	8-759-973-83	s IC MSM80C49-793GS-K
IC42	8-759-102-82	s IC UPD82C43G
IC43	8-759-204-71	s IC TC40H163F
IC44	8-759-204-71	s IC TC40H163F
IC45	8-759-204-71	s IC TC40H163F
IC46	8-759-009-04	s IC MC14050BF
IC47	8-759-009-04	s IC MC14050BF
IC48	8-759-201-61	s IC TC40H004F
IC49	8-759-201-53	s IC TC40H000F
IC50	8-759-204-40	s IC TC40H027F
IC51	8-759-201-63	s IC TC40H032F
IC52	8-759-925-90	s IC SN74HC74NS
IC53	8-759-201-61	s IC TC40H004F
IC54	8-759-201-61	s IC TC40H004F
IC55	8-759-209-69	s IC TC4S11F
IC56	8-759-201-60	s IC TC40H002F
IC57	8-759-906-53	s IC TL062CPS
IC58	8-759-209-57	s IC TC4S69F
IC59	8-759-100-93	s IC UPC393G2
Q1	8-729-105-29	s TRANSISTOR 2SA1385
Q2	8-729-105-29	s TRANSISTOR 2SA1385
Q3	8-729-105-19	s TRANSISTOR 2SC3518
Q4	8-729-101-25	s TRANSISTOR 2SC1009A
Q5	8-729-101-25	s TRANSISTOR 2SC1009A
Q6	8-729-101-25	s TRANSISTOR 2SC1009A
Q7	8-729-122-63	s TRANSISTOR 2SA1226
Q8	8-729-175-72	s TRANSISTOR 2SC2757
Q9	8-729-175-72	s TRANSISTOR 2SC2757
Q10	8-729-175-72	s TRANSISTOR 2SC2757
Q11	8-729-175-72	s TRANSISTOR 2SC2757
Q12	8-729-101-25	s TRANSISTOR 2SC1009A
Q13	8-729-101-25	s TRANSISTOR 2SC1009A
Q14	8-729-101-25	s TRANSISTOR 2SC1009A
Q15	8-729-101-25	s TRANSISTOR 2SC1009A
Q16	8-729-101-25	s TRANSISTOR 2SC1009A
Q17	8-729-122-63	s TRANSISTOR 2SA1226
Q18	8-729-109-44	s TRANSISTOR 2SK94
Q19	8-729-109-44	s TRANSISTOR 2SK94
Q20	8-729-101-25	s TRANSISTOR 2SC1009A
Q21	8-729-101-25	s TRANSISTOR 2SC1009A
Q22	8-729-101-25	s TRANSISTOR 2SC1009A
Q23	8-729-101-25	s TRANSISTOR 2SC1009A
Q24	8-729-100-66	s TRANSISTOR 2SC1623
Q25	8-729-122-63	s TRANSISTOR 2SA1226

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(AT-54 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q26	8-729-101-25	s TRANSISTOR 2SC1009A
Q27	8-729-109-44	s TRANSISTOR 2SK94
Q28	8-729-100-66	s TRANSISTOR 2SC1623
Q29	8-729-101-25	s TRANSISTOR 2SC1009A
Q30	8-729-101-25	s TRANSISTOR 2SC1009A
Q31	8-729-101-25	s TRANSISTOR 2SC1009A
Q32	8-729-101-25	s TRANSISTOR 2SC1009A
Q33	8-729-216-22	s TRANSISTOR 2SA1162
Q35	8-729-100-66	s TRANSISTOR 2SC1623
Q36	8-729-122-63	s TRANSISTOR 2SA1226
Q37	8-729-122-63	s TRANSISTOR 2SA1226
Q38	8-729-100-66	s TRANSISTOR 2SC1623
Q39	8-729-807-87	s TRANSISTOR 2SB1295-UL6
Q40	8-729-100-66	s TRANSISTOR 2SC1623
R1	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R2	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R3	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R4	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R5	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R6	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R7	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R8	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R9	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R10	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R23	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R24	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R25	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R27	1-216-649-11	s METAL CHIP 820 0.50% 1/10W
R37	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R38	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R39	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R40	1-216-636-11	s METAL CHIP 240 0.50% 1/10W
R48	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R49	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R50	1-216-653-11	s METAL CHIP 1.2K 0.50% 1/10W
R51	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R52	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R53	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R59	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R64	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R65	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R66	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R76	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R78	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R79	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R80	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R81	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R82	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R84	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R88	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R95	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R96	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R97	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R125	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R132	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R133	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R134	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R135	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R136	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W

(AT-54 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R137	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R142	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R328	1-216-624-11	s METAL CHIP 75 0.50% 1/10W
R356	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R357	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R359	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
RP1	1-232-509-00	s COMPOSITION CIRCUIT BLOCK
RV1	1-228-456-00	s RES. ADJ. METAL 1K
RV2	1-228-475-00	s RES. ADJ. METAL 20K
RV3	1-228-472-00	s RES. ADJ. METAL 2K
RV4	1-228-460-00	s RES. ADJ. METAL 20K
RV5	1-228-463-00	s RES. ADJ. METAL 200K
RV6	1-228-457-00	s RES. ADJ. METAL 2K
S1	1-553-564-00	s SWITCH. ROTARY
S2	1-572-222-11	s SWITCH. TOGGLE
X1	1-527-941-00	s VIBRATOR, CRYSTAL 10.944MHz

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

AU-129P BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-072-A	o MOUNTED CIRCUIT BOARD, AU-129P
1pc	2-251-622-00	o LEVER, PC BOARD
1pc	7-626-317-11	s PIN, SPRING 2.5X6
2pcs	7-628-254-40	s SCREW +PS 2.6X12
4pcs	7-682-902-01	s SCREW +PWH 2.6X4
C15	1-163-123-00	s CERAMIC CHIP 180PF 5% 50V
C16	1-163-011-11	s CERAMIC CHIP 0.0015uF 10% 50V
C19	1-101-361-00	s CERAMIC 39PF 5% 50V
C20	1-102-973-00	s CERAMIC 100PF 5% 50V
C24	1-163-120-00	s CERAMIC CHIP 130PF 5% 50V
C34	1-101-361-00	s CERAMIC 39PF 5% 50V
C35	1-102-973-00	s CERAMIC 100PF 5% 50V
C39	1-163-124-00	s CERAMIC 200PF 5% 50V
C46	1-124-584-00	s ELECT 100uF 20% 10V
C52	1-163-127-00	s CERAMIC CHIP 270PF 5% 50V
C53	1-163-135-00	s CERAMIC CHIP 560PF 5% 50V
C63	1-163-112-00	s CERAMIC 62PF 5% 50V
C70	1-124-584-00	s ELECT 100uF 20% 10V
C75	1-124-584-00	s ELECT 100uF 20% 10V
C82	1-163-127-00	s CERAMIC CHIP 270PF 5% 50V
C83	1-163-135-00	s CERAMIC CHIP 560PF 5% 50V
C93	1-163-116-00	s CERAMIC CHIP 91PF 5% 50V
C100	1-124-584-00	s ELECT 100uF 20% 10V
C108	1-163-127-00	s CERAMIC CHIP 270PF 5% 50V
C109	1-163-135-00	s CERAMIC CHIP 560PF 5% 50V
C119	1-163-115-00	s CERAMIC CHIP 82PF 5% 50V
C124	1-127-518-11	s ELECT(SOLID) 100uF 20% 16V
C126	1-124-584-00	s ELECT 100uF 20% 10V
C145	1-163-131-00	s CERAMIC CHIP 390PF 5% 50V
C147	1-101-884-00	s CERAMIC 56PF 5% 50V
C148	1-101-884-00	s CERAMIC 56PF 5% 50V
C150	1-163-119-00	s CERAMIC CHIP 120PF 5% 50V
C157	1-124-292-00	s ELECT 33uF 20% 6.3V
C171	1-163-131-00	s CERAMIC CHIP 390PF 5% 50V
C173	1-102-816-00	s CERAMIC 120PF 5% 50V
C176	1-163-119-00	s CERAMIC CHIP 120PF 5% 50V
C184	1-124-292-00	s ELECT 33uF 20% 6.3V
C195	1-163-131-00	s CERAMIC CHIP 390PF 5% 50V
C197	1-102-973-00	s CERAMIC 100PF 5% 50V
C198	1-102-971-00	s CERAMIC 82PF 5% 50V
C206	1-124-292-00	s ELECT 33uF 20% 6.3V
C208	1-124-499-11	s ELECT 1uF 20% 50V
C209	1-124-499-11	s ELECT 1uF 20% 50V
C210	1-126-163-11	s ELECT 4.7uF 20% 50V
C217	1-163-131-00	s CERAMIC CHIP 390PF 5% 50V
C219	1-101-888-00	s CERAMIC 68PF 5% 50V
C220	1-101-888-00	s CERAMIC 68PF 5% 50V
C228	1-124-292-00	s ELECT 33uF 20% 6.3V
C231	1-124-499-11	s ELECT 1uF 20% 50V
C232	1-124-499-11	s ELECT 1uF 20% 50V
C234	1-126-163-11	s ELECT 4.7uF 20% 50V
C242	1-101-880-00	s CERAMIC 47PF 5% 50V
C248	1-163-103-00	s CERAMIC CHIP 27PF 5% 50V
C310	1-163-241-11	s CERAMIC CHIP 39PF 5% 50V
C311	1-163-241-11	s CERAMIC CHIP 39PF 5% 50V
C312	1-163-241-11	s CERAMIC CHIP 39PF 5% 50V
C313	1-163-241-11	s CERAMIC CHIP 39PF 5% 50V
C314	1-163-241-11	s CERAMIC CHIP 39PF 5% 50V

(AU-129P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
CF1	1-578-066-11	s FILTER, CERAMIC 4.3MHz
CF2	1-578-066-11	s FILTER, CERAMIC 4.3MHz
CF3	1-577-203-11	s FILTER, CERAMIC 3.6MHz
CF4	1-577-203-11	s FILTER, CERAMIC 3.6MHz
CF5	1-577-204-11	s FILTER, CERAMIC 3.9MHz
CF6	1-577-204-11	s FILTER, CERAMIC 3.9MHz
CF7	1-578-068-12	s FILTER, CERAMIC 7.1MHz
CF8	1-578-069-11	s FILTER, CERAMIC 7.4MHz
CF9	1-567-100-00	s FILTER, CERAMIC 6.0MHz
CF10	1-578-067-11	s FILTER, CERAMIC 6.7MHz
CF11	1-567-458-11	s FILTER, CERAMIC 5.5MHz
CN1	1-562-730-11	o CONNECTOR, MULTI 90P, MALE
CP1	1-464-758-11	s CONVERTER, DC-DC (CD-54)
D1	8-719-101-41	s DIODE RD3.9EL2
D2	8-719-118-38	s DIODE 1S246A
D3	8-719-101-97	s DIODE 1SS97-1
D4	8-719-104-34	s DIODE 1S2836
D5	8-719-101-33	s DIODE RD2.7EL2
D6	8-719-800-76	s DIODE 1SS226
D7	8-719-913-44	s DIODE ERA82-004
D8	8-719-800-76	s DIODE 1SS226
D9	8-719-913-44	s DIODE ERA82-004
D10	8-719-101-58	s DIODE RD5.6EL2
D11	8-719-104-31	s DIODE 1S2838
D14	8-719-104-31	s DIODE 1S2838
D15	8-719-104-31	s DIODE 1S2838
D16	8-719-104-31	s DIODE 1S2838
D18	8-719-104-31	s DIODE 1S2838
D19	8-719-104-31	s DIODE 1S2838
D20	8-719-104-34	s DIODE 1S2836
D21	8-719-949-35	s DIODE FC53M-6
D22	8-719-800-76	s DIODE 1SS226
D23	8-719-101-67	s DIODE RD7.5E-L2
D24	8-719-104-31	s DIODE 1S2838
D25	8-719-104-34	s DIODE 1S2836
D26	8-719-949-35	s DIODE FC53M-6
D27	8-719-800-76	s DIODE 1SS226
D28	8-719-104-34	s DIODE 1S2836
D29	8-719-104-34	s DIODE 1S2836
D30	8-719-949-35	s DIODE FC53M-6
D31	8-719-949-35	s DIODE FC53M-6
D32	8-719-104-34	s DIODE 1S2836
D33	8-719-104-31	s DIODE 1S2838
D34	8-719-104-31	s DIODE 1S2838
D35	8-719-104-31	s DIODE 1S2838
D36	8-719-104-31	s DIODE 1S2838
D37	8-719-104-31	s DIODE 1S2838
D38	8-719-104-34	s DIODE 1S2836
D39	8-719-104-34	s DIODE 1S2836
D40	8-719-949-35	s DIODE FC53M-6
D41	8-719-949-35	s DIODE FC53M-6
D42	8-719-104-34	s DIODE 1S2836
D43	8-719-104-31	s DIODE 1S2838
D44	8-719-104-31	s DIODE 1S2838
D45	8-719-104-31	s DIODE 1S2838
D46	8-719-104-31	s DIODE 1S2838
D47	8-719-104-31	s DIODE 1S2838

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(AU-129P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
D48	8-719-104-34	s DIODE 1S2836
D49	8-719-104-34	s DIODE 1S2836
FL1	1-236-638-11	s BAND PASS 2.9MHz
FL2	1-236-639-11	s BAND PASS 2.5MHz
FL3	1-236-637-11	s LPF
IC1	8-759-906-53	s IC TL062CPS
IC2	8-759-908-17	s IC TL082CPS
IC3	8-759-201-36	s IC TA7303P
IC4	8-759-906-53	s IC TL062CPS
IC5	8-759-201-36	s IC TA7303P
IC6	8-759-981-86	s IC RC4556MA
IC7	8-759-324-12	s IC HA12412
IC8	8-759-981-86	s IC RC4556MA
IC9	8-759-981-86	s IC RC4556MA
IC10	8-759-324-12	s IC HA12412
IC11	8-759-981-86	s IC RC4556MA
IC12	8-759-324-12	s IC HA12412
IC13	8-759-981-86	s IC RC4556MA
IC14	8-759-981-92	s IC RC4558M
IC15	8-759-981-92	s IC RC4558M
IC16	8-759-981-92	s IC RC4558M
IC17	8-759-981-92	s IC RC4558M
IC18	8-759-209-15	s IC TC4SU69F
IC19	8-759-147-84	s IC CXD8072Q
IC20	8-759-100-94	s IC UPC358G2
IC21	8-759-100-94	s IC UPC358G2
JR1	1-217-666-11	s RES, SHORT 0.01 1/6w
JR2	1-217-666-11	s RES, SHORT 0.01 1/6w
L2	1-410-513-11	s MICRO 22uH
L3	1-410-513-11	s MICRO 22uH
L4	1-410-513-11	s MICRO 22uH
L5	1-410-509-11	s MICRO 10uH
L6	1-408-358-00	s INDUCTOR 100UH
L7	1-410-513-11	s MICRO 22uH
L8	1-410-513-11	s MICRO 22uH
L9	1-408-358-00	s INDUCTOR 100UH
L10	1-410-513-11	s MICRO 22uH
L11	1-410-513-11	s MICRO 22uH
L12	1-410-509-11	s MICRO 10uH
L13	1-408-358-00	s INDUCTOR 100UH
L14	1-410-513-11	s MICRO 22uH
L15	1-410-509-11	s MICRO 10uH
L16	1-410-509-11	s MICRO 10uH
L17	1-410-513-11	s MICRO 22uH
L18	1-410-509-11	s MICRO 10uH
L19	1-410-513-11	s MICRO 22uH
L20	1-410-509-11	s MICRO 10uH
L21	1-410-513-11	s MICRO 22uH
L22	1-410-509-11	s MICRO 10uH
L23	1-410-513-11	s MICRO 22uH
L24	1-410-513-11	s MICRO 22uH
L25	1-410-509-11	s MICRO 10uH
L26	1-410-513-11	s MICRO 22uH
LV1	1-459-891-11	s COIL, VARIABLE
LV2	1-459-892-11	s COIL, VARIABLE
LV3	1-459-888-11	s COIL, VARIABLE
LV4	1-459-888-11	s COIL, VARIABLE

(AU-129P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
LV5	1-459-888-11	s COIL, VARIABLE
LV6	1-459-888-11	s COIL, VARIABLE
LV7	1-459-890-11	s COIL, VARIABLE
Q1	8-729-105-29	s TRANSISTOR 2SA1385
Q2	8-729-216-22	s TRANSISTOR 2SA1162
Q3	8-729-216-22	s TRANSISTOR 2SA1162
Q4	8-729-100-66	s TRANSISTOR 2SC1623
Q5	8-729-216-22	s TRANSISTOR 2SA1162
Q6	8-729-122-63	s TRANSISTOR 2SA1226
Q7	8-729-122-63	s TRANSISTOR 2SA1226
Q8	8-729-216-22	s TRANSISTOR 2SA1162
Q9	8-729-216-22	s TRANSISTOR 2SA1162
Q10	8-729-216-22	s TRANSISTOR 2SA1162
Q11	8-729-122-63	s TRANSISTOR 2SA1226
Q12	8-729-122-63	s TRANSISTOR 2SA1226
Q13	8-729-100-66	s TRANSISTOR 2SC1623
Q14	8-729-216-22	s TRANSISTOR 2SA1162
Q15	8-729-122-63	s TRANSISTOR 2SA1226
Q16	8-729-122-63	s TRANSISTOR 2SA1226
Q17	8-729-100-66	s TRANSISTOR 2SC1623
Q18	8-729-216-22	s TRANSISTOR 2SA1162
Q19	8-729-122-63	s TRANSISTOR 2SA1226
Q20	8-729-122-63	s TRANSISTOR 2SA1226
Q21	8-729-100-66	s TRANSISTOR 2SC1623
Q22	8-729-216-22	s TRANSISTOR 2SA1162
Q23	8-729-122-63	s TRANSISTOR 2SA1226
Q24	8-729-122-63	s TRANSISTOR 2SA1226
Q25	8-729-200-87	s TRANSISTOR 2SC2714Y
Q26	8-729-122-63	s TRANSISTOR 2SA1226
Q27	8-729-122-63	s TRANSISTOR 2SA1226
Q28	8-729-200-87	s TRANSISTOR 2SC2714Y
Q29	8-729-122-63	s TRANSISTOR 2SA1226
Q30	8-729-200-87	s TRANSISTOR 2SC2714Y
Q31	8-729-200-87	s TRANSISTOR 2SC2714Y
Q33	8-729-100-66	s TRANSISTOR 2SC1623
Q34	8-729-100-66	s TRANSISTOR 2SC1623
Q35	8-729-100-66	s TRANSISTOR 2SC1623
Q36	8-729-216-22	s TRANSISTOR 2SA1162
Q37	8-729-109-44	s TRANSISTOR 2SK94
Q38	8-729-119-04	s TRANSISTOR 2SC3115-D27
Q39	8-729-119-04	s TRANSISTOR 2SC3115-D27
Q40	8-729-100-66	s TRANSISTOR 2SC1623
Q41	8-729-200-87	s TRANSISTOR 2SC2714Y
Q42	8-729-200-87	s TRANSISTOR 2SC2714Y
Q44	8-729-100-66	s TRANSISTOR 2SC1623
Q45	8-729-100-66	s TRANSISTOR 2SC1623
Q46	8-729-216-22	s TRANSISTOR 2SA1162
Q47	8-729-109-44	s TRANSISTOR 2SK94
Q48	8-729-119-04	s TRANSISTOR 2SC3115-D27
Q49	8-729-119-04	s TRANSISTOR 2SC3115-D27
Q50	8-729-200-87	s TRANSISTOR 2SC2714Y
Q51	8-729-101-25	s TRANSISTOR 2SC1009A
Q52	8-729-100-66	s TRANSISTOR 2SC1623
Q53	8-729-100-66	s TRANSISTOR 2SC1623
Q54	8-729-216-22	s TRANSISTOR 2SA1162
Q55	8-729-119-04	s TRANSISTOR 2SC3115-D27
Q56	8-729-109-44	s TRANSISTOR 2SK94
Q57	8-729-109-44	s TRANSISTOR 2SK94

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(AU-129P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q58	8-729-109-44	s TRANSISTOR 2SK94
Q59	8-729-109-44	s TRANSISTOR 2SK94
Q60	8-729-119-04	s TRANSISTOR 2SC3115-D27
Q61	8-729-200-87	s TRANSISTOR 2SC2714Y
Q62	8-729-101-25	s TRANSISTOR 2SC1009A
Q63	8-729-100-66	s TRANSISTOR 2SC1623
Q64	8-729-100-66	s TRANSISTOR 2SC1623
Q65	8-729-216-22	s TRANSISTOR 2SA1162
Q66	8-729-119-04	s TRANSISTOR 2SC3115-D27
Q67	8-729-109-44	s TRANSISTOR 2SK94
Q68	8-729-109-44	s TRANSISTOR 2SK94
Q69	8-729-109-44	s TRANSISTOR 2SK94
Q70	8-729-109-44	s TRANSISTOR 2SK94
Q71	8-729-119-04	s TRANSISTOR 2SC3115-D27
Q72	8-729-200-87	s TRANSISTOR 2SC2714Y
Q73	8-729-100-66	s TRANSISTOR 2SC1623
Q74	8-729-100-66	s TRANSISTOR 2SC1623
R3	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R4	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R5	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R6	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R15	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R16	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R26	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R27	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R30	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R32	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R35	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R51	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R54	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R66	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R67	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R69	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R74	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R75	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R78	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R83	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R86	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R87	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R115	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R116	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R125	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R126	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R129	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R134	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R137	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R138	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R140	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R155	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R156	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R164	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R165	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R168	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R173	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R176	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R177	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R179	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R185	1-247-883-00	s CARBON 150K 5% 1/4W

(AU-129P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R187	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R188	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R192	1-216-680-11	s METAL CHIP 16K 0.50% 1/10W
R194	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R195	1-216-654-11	s METAL CHIP 1.3K 0.50% 1/10W
R197	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R198	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R199	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R201	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R202	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R203	1-247-804-11	s CARBON 75 5% 1/4W
R213	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R214	1-216-648-11	s METAL CHIP 750 0.50% 1/10W
R215	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R222	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R225	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R226	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R227	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R228	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R229	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R232	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R233	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R234	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R235	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R236	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R242	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R245	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R246	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R247	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R248	1-216-649-11	s METAL CHIP 820 0.50% 1/10W
R249	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R250	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R251	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R253	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R256	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R257	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R269	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R270	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R271	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R278	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R281	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R282	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R283	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R284	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R285	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R287	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R288	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R289	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R290	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R291	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R297	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R300	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R301	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R302	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R303	1-216-649-11	s METAL CHIP 820 0.50% 1/10W
R304	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R305	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R306	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R308	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(AU-129P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R311	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R312	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R316	1-216-646-11	s METAL CHIP 620 0.50% 1/10W
R317	1-216-646-11	s METAL CHIP 620 0.50% 1/10W
R318	1-216-646-11	s METAL CHIP 620 0.50% 1/10W
R325	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R328	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R329	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R330	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R333	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R334	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R335	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R336	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R337	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R339	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R341	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R342	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R344	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R345	1-216-653-11	s METAL CHIP 1.2K 0.50% 1/10W
R346	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R347	1-216-674-11	s METAL CHIP 9.1K 0.50% 1/10W
R348	1-216-690-11	s METAL CHIP 43K 0.50% 1/10W
R353	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R354	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R355	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R357	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R358	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R359	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R360	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R365	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R366	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R367	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R374	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R377	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R378	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R379	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R382	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R383	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R384	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R385	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R386	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R388	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R391	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R392	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R394	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R395	1-216-653-11	s METAL CHIP 1.2K 0.50% 1/10W
R396	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R397	1-216-674-11	s METAL CHIP 9.1K 0.50% 1/10W
R398	1-216-690-11	s METAL CHIP 43K 0.50% 1/10W
R403	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R404	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R405	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R407	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R408	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R409	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R410	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R414	1-216-646-11	s METAL CHIP 620 0.50% 1/10W
R415	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R416	1-216-646-11	s METAL CHIP 620 0.50% 1/10W

(AU-129P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R421	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R423	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R424	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R426	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R438	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R439	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R441	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R442	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R450	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R451	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R452	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R453	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
RV1	1-228-457-00	s RES. ADJ. METAL 2K
RV2	1-228-460-00	s RES. ADJ. METAL 20K
RV3	1-228-460-00	s RES. ADJ. METAL 20K
RV4	1-228-460-00	s RES. ADJ. METAL 20K
RV5	1-228-459-00	s RES. ADJ. METAL 10K
RV6	1-228-459-00	s RES. ADJ. METAL 10K
RV7	1-228-460-00	s RES. ADJ. METAL 20K
RV8	1-228-459-00	s RES. ADJ. METAL 10K
RV9	1-228-460-00	s RES. ADJ. METAL 20K
RV10	1-228-459-00	s RES. ADJ. METAL 10K
RV11	1-228-459-00	s RES. ADJ. METAL 10K
S1	1-570-134-11	s SWITCH, SLIDE
S2	1-570-134-11	s SWITCH, SLIDE
S3	1-570-857-11	s SWITCH, SLIDE
S4	1-570-857-11	s SWITCH, SLIDE
S5	1-570-857-11	s SWITCH, SLIDE
S6	1-571-395-11	s SWITCH, SLIDE
S7	1-554-295-00	s SWITCH, SLIDE
S8	1-571-395-11	s SWITCH, SLIDE
S9	1-554-295-00	s SWITCH, SLIDE
S10	1-570-610-11	s SWITCH, TOGGLE
T1	1-426-471-11	s COIL, FM RECOVER
T2	1-426-469-11	s COIL, FM RECOVER
T3	1-426-470-11	s COIL, FM RECOVER
X1	1-567-153-00	s VIBRATOR, CRYSTAL 40KHz

CN-261 BOARD

Ref. No. or Q'ty	Part No.	SP Description
	1-626-818-11	o PRINTED CIRCUIT BOARD, CN-261
CN1	1-566-163-11	o CONNECTOR, 5P
S1	1-526-572-00	s VOLTAGE SELECTOR

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

CN-375 BOARD

Ref. No. or Q'ty	Part No.	SP Description
	1-633-003-11	o PRINTED CIRCUIT BOARD, CN-375
C1	1-135-166-21	s TANTALUM CHIP 47uF 10% 10V
C2	1-135-166-21	s TANTALUM CHIP 47uF 10% 10V
C3	1-124-119-00	s ELECT 330uF 20% 16V
C4	1-124-119-00	s ELECT 330uF 20% 16V
C5	1-124-119-00	s ELECT 330uF 20% 16V
CN1	1-562-773-11	o CONNECTOR, 40P, FEMALE
CN2	1-565-157-11	o CONNECTOR, 10P, MALE
CN3	1-565-157-11	o CONNECTOR, 10P, MALE
CN4	1-565-157-11	o CONNECTOR, 10P, MALE
CN5	1-565-157-11	o CONNECTOR, 10P, MALE
CN6	1-565-157-11	o CONNECTOR, 10P, MALE
CN7	1-565-157-11	o CONNECTOR, 10P, MALE
IC1	8-759-321-75	s IC HD74AC04P-R
IC2	8-759-321-75	s IC HD74AC04P-R

CN-390 BOARD

Ref. No. or Q'ty	Part No.	SP Description
	1-632-985-11	o PRINTED CIRCUIT BOARD, CN-390
CN1	1-506-641-11	o CONNECTOR, 24P MALE
CN2	1-506-468-11	o CONNECTOR, 3P, MALE
CN3	1-506-468-11	o CONNECTOR, 3P, MALE
CN4	1-565-443-11	o CONNECTOR, 10P FEMALE "TRACKER"
CN5	1-562-222-00	s CONNECTOR, 6P FEMALE "RET CONTROL"
CN6	1-506-467-11	o CONNECTOR, 2P, MALE
CN7	1-506-467-11	o CONNECTOR, 2P, MALE

CN-391 BOARD

Ref. No. or Q'ty	Part No.	SP Description
	1-632-986-11	o PRINTED CIRCUIT BOARD, CN-391
CN1	1-506-623-11	o CONNECTOR, 16P, MALE

CN-451 BOARD

Ref. No. or Q'ty	Part No.	SP Description
	1-633-551-11	o PRINTED CIRCUIT BOARD, CN-451
	1-517-075-00	s SOCKET, LAMP
CN1	1-506-467-11	s CONNECTOR, 2P MALE
PL101	1-518-411-00	s LAMP "TALLY"

EX-228 BOARD

Ref. No. or Q'ty	Part No.	SP Description
lpc	A-7515-082-A	o MOUNTED CIRCUIT BOARD, EX-228
CN1	1-562-730-11	o CONNECTOR, MULTI 90P, MALE
CN2	1-562-876-11	o CONNECTOR, MULTI (L-J) 90P, FEMALE

FL-89 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-073-A	o MOUNTED CIRCUIT BOARD, FL-89
1pc	2-251-622-00	o LEVER, PC BOARD
1pc	7-626-317-11	s PIN, SPRING 2.5X6
2pcs	7-628-254-40	s SCREW +PS 2.6X12
2pcs	7-682-545-04	s SCREW +B 3X4
4pcs	7-682-902-01	s SCREW +PWH 2.6X4
C13	1-102-936-00	s CERAMIC 3PF 0.5PF 50V
CN1	1-562-730-11	o CONNECTOR, MULTI 90P, MALE
CN2	1-506-470-11	o CONNECTOR, 5P, MALE
CN3	1-569-170-11	o CONNECTOR, COAXIAL (SMALL TYPE)
CN4	1-569-170-11	o CONNECTOR, COAXIAL (SMALL TYPE)
CN5	1-569-170-11	o CONNECTOR, COAXIAL (SMALL TYPE)
CN6	1-569-170-11	o CONNECTOR, COAXIAL (SMALL TYPE)
D1	8-719-101-64	s DIODE RD6.8EL2
D2	8-719-118-38	s DIODE 1SZ46A
D3	8-719-101-64	s DIODE RD6.8EL2
D4	8-713-300-57	s DIODE 1T33
D5	8-713-300-57	s DIODE 1T33
D6	8-713-300-57	s DIODE 1T33
D7	8-713-300-57	s DIODE 1T33
D8	8-719-104-31	s DIODE 1S2838
FL1	1-426-476-12	s FILTER, MPX
FL2	1-236-272-11	s BAND PASS 70MHz
FL3	1-236-277-11	s LOW PASS 4MHz
IC1	8-759-906-53	s IC TL062CPS
IC2	8-759-927-85	s IC CA3102E-S
IC3	8-759-927-85	s IC CA3102E-S
IC4	8-752-032-63	s IC CXA1165M
L5	1-410-322-11	s MICRO 3.3uH
LV1	1-410-350-11	s MICRO 0.6uH
LV2	1-410-296-11	s MICRO 0.2uH
Q1	8-729-105-29	s TRANSISTOR 2SA1385
Q2	8-729-105-19	s TRANSISTOR 2SC3518
Q3	8-729-200-87	s TRANSISTOR 2SC2714Y
Q4	8-729-200-87	s TRANSISTOR 2SC2714Y
Q5	8-729-175-73	s TRANSISTOR 2SC2757
Q6	8-729-175-73	s TRANSISTOR 2SC2757
Q7	8-729-175-73	s TRANSISTOR 2SC2757
Q8	8-729-175-73	s TRANSISTOR 2SC2757
Q9	8-729-175-73	s TRANSISTOR 2SC2757
Q10	8-729-175-73	s TRANSISTOR 2SC2757
Q11	8-729-175-73	s TRANSISTOR 2SC2757
Q12	8-729-175-73	s TRANSISTOR 2SC2757
Q13	8-729-175-73	s TRANSISTOR 2SC2757
Q14	8-729-175-73	s TRANSISTOR 2SC2757
Q15	8-729-175-73	s TRANSISTOR 2SC2757
Q16	8-729-100-66	s TRANSISTOR 2SC1623
Q17	8-729-200-87	s TRANSISTOR 2SC2714Y
Q18	8-729-216-22	s TRANSISTOR 2SA1162
Q19	8-729-216-22	s TRANSISTOR 2SA1162
Q20	8-729-216-22	s TRANSISTOR 2SA1162
Q21	8-729-216-22	s TRANSISTOR 2SA1162
R3	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R4	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W

(FL-89 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R5	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R6	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R7	1-216-623-11	s METAL CHIP 68 0.50% 1/10W
R16	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R19	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R20	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R21	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R22	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R23	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R24	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R25	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R26	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R29	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R30	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R31	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R32	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R33	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R34	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R35	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R38	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R39	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R40	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R41	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R42	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R43	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R44	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R46	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R47	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R48	1-216-615-11	s METAL CHIP 33 0.50% 1/10W
R49	1-216-615-11	s METAL CHIP 33 0.50% 1/10W
R51	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R52	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R53	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R54	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R55	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R67	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R68	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R69	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R71	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R72	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R74	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R75	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R76	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R83	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R84	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R85	1-216-619-11	s METAL CHIP 47 0.50% 1/10W
RV1	1-228-457-00	s RES. ADJ. METAL 2K
RV2	1-228-455-00	s RES. ADJ. METAL 500
RV3	1-228-459-00	s RES. ADJ. METAL 10K
RV4	1-228-459-00	s RES. ADJ. METAL 10K

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

IE-26P BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-066-A	o MOUNTED CIRCUIT BOARD, IE-26P
1pc	2-251-622-00	o LEVER, PC BOARD
8pcs	3-621-124-00	o SPACER
1pc	7-626-317-11	s PIN, SPRING 2.5X6
2pcs	7-628-254-40	s SCREW +PS 2.6X12
4pcs	7-682-902-01	s SCREW +PWH 2.6X4
C20	1-163-086-00	s CERAMIC CHIP 3PF 0.25PF 50V
C93	1-163-086-00	s CERAMIC CHIP 3PF 0.25PF 50V
C113	1-163-088-00	s CERAMIC CHIP 5PF 0.25PF 50V
C115	1-163-088-00	s CERAMIC CHIP 5PF 0.25PF 50V
C163	1-128-283-11	s ELECT 100MF 20% 6.3V
C206	1-163-135-00	s CERAMIC CHIP 560PF 5% 50V
C211	1-163-088-00	s CERAMIC CHIP 5PF 0.25PF 50V
C212	1-163-088-00	s CERAMIC CHIP 5PF 0.25PF 50V
C213	1-163-088-00	s CERAMIC CHIP 5PF 0.25PF 50V
C214	1-163-088-00	s CERAMIC CHIP 5P 0.25PF 50V
C215	1-163-088-00	s CERAMIC CHIP 5P 0.25PF 50V
C218	1-128-283-11	s ELECT 100MF 20% 6.3V
CN1	1-562-730-11	o CONNECTOR, MULTI 90P, MALE
CP1	1-809-110-21	s PC BOARD, MATRIX(MX-2)
CV1	1-141-299-11	s CERAMIC TRIMMER 6P
CV4	1-141-299-11	s CERAMIC TRIMMER 6P
D1	8-719-921-12	s DIODE HZ2BLJ
D2	8-719-118-38	s DIODE 1S246A
D3	8-719-101-64	s DIODE RD6.8EL2
D4	8-719-101-64	s DIODE RD6.8EL2
D5	8-719-101-97	s DIODE 1SS97-1
D6	8-719-101-97	s DIODE 1SS97-1
D7	8-719-101-97	s DIODE 1SS97-1
D8	8-719-104-34	s DIODE 1S2836
D9	8-719-104-34	s DIODE 1S2836
D10	8-719-101-97	s DIODE 1SS97-1
D13	8-719-104-34	s DIODE 1S2836
D14	8-719-800-76	s DIODE 1SS226
DL1	1-415-676-13	s DELAY LINE 63.976uS/63.996uS
DL2	1-415-489-11	s DELAY LINE 160nS+8nS
DL3	1-415-489-11	s DELAY LINE 160nS+8nS
DL4	1-415-489-11	s DELAY LINE 160nS+8nS
DL5	1-415-676-13	s DELAY LINE 63.976uS/63.996uS
DL6	1-415-491-11	s DELAY LINE 200nS
DL7	1-415-709-11	s DELAY LINE 100nS
DL8	1-415-408-11	s DELAY LINE, DUAL, 50nS, 100nS
DL10	1-415-836-11	s DELAY LINE 40nS+/-2nS
FL1	1-235-572-11	s LOW PASS 4.43MHZ
FL2	1-235-572-11	s LOW PASS 4.43MHZ
FL3	1-236-181-11	s LOW PASS 3.58MHZ
IC1	8-759-906-54	s IC TL064CNS
IC2	8-759-981-51	s IC RC1496M
IC3	1-807-416-11	s IC BH-1211
IC5	8-759-009-07	s IC MC14053BF
IC6	8-759-906-54	s IC TL064CNS
IC8	1-807-416-11	s IC BH-1211
IC9	8-759-906-53	s IC TL062CPS
IC10	8-759-981-51	s IC RC1496M
IC11	1-807-416-11	s IC BH-1211

(IE-26P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC12	1-807-416-11	s IC BH-1211
IC13	8-759-906-53	s IC TL062CPS
IC14	8-759-906-53	s IC TL062CPS
IC15	8-759-981-51	s IC RC1496M
IC16	8-759-147-84	s IC CXD8072Q
IC17	8-759-994-64	s IC MB88341PF
IC18	8-759-906-54	s IC TL064CNS
L6	1-410-509-11	s MICRO 10uH
L19	1-410-509-11	s MICRO 10uH
L28	1-410-522-11	s INDUCTOR 120UH
Q1	8-729-105-29	s TRANSISTOR 2SA1385
Q2	8-729-105-29	s TRANSISTOR 2SA1385
Q3	8-729-105-19	s TRANSISTOR 2SC3518
Q4	8-729-216-22	s TRANSISTOR 2SA1162
Q5	8-729-100-66	s TRANSISTOR 2SC1623
Q6	8-729-200-87	s TRANSISTOR 2SC2714Y
Q7	8-729-200-87	s TRANSISTOR 2SC2714Y
Q8	8-765-930-08	s TRANSISTOR 3SK163-2
Q9	8-729-200-87	s TRANSISTOR 2SC2714Y
Q10	8-729-200-87	s TRANSISTOR 2SC2714Y
Q11	8-729-175-73	s TRANSISTOR 2SC2757
Q12	8-729-175-73	s TRANSISTOR 2SC2757
Q13	8-729-175-73	s TRANSISTOR 2SC2757
Q14	8-729-200-87	s TRANSISTOR 2SC2714Y
Q15	8-729-216-22	s TRANSISTOR 2SA1162
Q16	8-729-100-66	s TRANSISTOR 2SC1623
Q17	8-729-216-22	s TRANSISTOR 2SA1162
Q18	8-729-100-66	s TRANSISTOR 2SC1623
Q19	8-729-216-22	s TRANSISTOR 2SA1162
Q20	8-729-216-22	s TRANSISTOR 2SA1162
Q21	8-729-216-22	s TRANSISTOR 2SA1162
Q22	8-729-100-66	s TRANSISTOR 2SC1623
Q23	8-729-216-22	s TRANSISTOR 2SA1162
Q24	8-729-216-22	s TRANSISTOR 2SA1162
Q25	8-729-216-22	s TRANSISTOR 2SA1162
Q26	8-729-100-66	s TRANSISTOR 2SC1623
Q27	8-729-100-66	s TRANSISTOR 2SC1623
Q28	8-729-216-22	s TRANSISTOR 2SA1162
Q29	8-729-100-66	s TRANSISTOR 2SC1623
Q30	8-729-216-22	s TRANSISTOR 2SA1162
Q31	8-729-216-22	s TRANSISTOR 2SA1162
Q32	8-729-100-66	s TRANSISTOR 2SC1623
Q33	8-729-100-66	s TRANSISTOR 2SC1623
Q34	8-729-200-87	s TRANSISTOR 2SC2714Y
Q35	8-729-200-87	s TRANSISTOR 2SC2714Y
Q36	8-765-930-08	s TRANSISTOR 3SK163-2
Q37	8-729-200-87	s TRANSISTOR 2SC2714Y
Q38	8-729-200-87	s TRANSISTOR 2SC2714Y
Q39	8-729-175-73	s TRANSISTOR 2SC2757
Q40	8-729-175-73	s TRANSISTOR 2SC2757
Q41	8-729-200-87	s TRANSISTOR 2SC2714Y
Q42	8-729-216-22	s TRANSISTOR 2SA1162
Q43	8-729-100-66	s TRANSISTOR 2SC1623
Q44	8-729-100-66	s TRANSISTOR 2SC1623
Q45	8-729-100-66	s TRANSISTOR 2SC1623
Q46	8-729-109-44	s TRANSISTOR 2SK94
Q47	8-729-100-66	s TRANSISTOR 2SC1623
Q48	8-729-109-44	s TRANSISTOR 2SK94

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(IE-26P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q49	8-729-100-66	s TRANSISTOR 2SC1623
Q50	8-729-109-44	s TRANSISTOR 2SK94
Q51	8-729-200-87	s TRANSISTOR 2SC2714Y
Q52	8-729-100-66	s TRANSISTOR 2SC1623
Q53	8-729-200-87	s TRANSISTOR 2SC2714Y
Q54	8-729-216-22	s TRANSISTOR 2SA1162
Q55	8-729-200-87	s TRANSISTOR 2SC2714Y
Q56	8-729-200-87	s TRANSISTOR 2SC2714Y
Q57	8-729-100-66	s TRANSISTOR 2SC1623
Q58	8-729-200-87	s TRANSISTOR 2SC2714Y
Q59	8-729-216-22	s TRANSISTOR 2SA1162
Q60	8-729-200-87	s TRANSISTOR 2SC2714Y
Q61	8-729-216-22	s TRANSISTOR 2SA1162
Q62	8-729-216-22	s TRANSISTOR 2SA1162
Q63	8-729-100-66	s TRANSISTOR 2SC1623
Q64	8-729-100-66	s TRANSISTOR 2SC1623
Q65	8-729-100-66	s TRANSISTOR 2SC1623
Q66	8-729-100-66	s TRANSISTOR 2SC1623
Q67	8-729-100-66	s TRANSISTOR 2SC1623
Q68	8-729-100-66	s TRANSISTOR 2SC1623
Q69	8-729-100-66	s TRANSISTOR 2SC1623
Q70	8-729-100-66	s TRANSISTOR 2SC1623
Q71	8-729-200-87	s TRANSISTOR 2SC2714Y
Q72	8-729-216-22	s TRANSISTOR 2SA1162
Q73	8-729-100-66	s TRANSISTOR 2SC1623
Q74	8-729-200-87	s TRANSISTOR 2SC2714Y
Q75	8-729-200-87	s TRANSISTOR 2SC2714Y
Q76	8-729-200-87	s TRANSISTOR 2SC2714Y
Q77	8-765-930-08	s TRANSISTOR 3SK163-2
Q78	8-729-200-87	s TRANSISTOR 2SC2714Y
Q79	8-729-200-87	s TRANSISTOR 2SC2714Y
Q80	8-729-175-73	s TRANSISTOR 2SC2757
Q81	8-729-175-73	s TRANSISTOR 2SC2757
Q82	8-729-175-73	s TRANSISTOR 2SC2757
Q83	8-729-200-87	s TRANSISTOR 2SC2714Y
Q84	8-729-216-22	s TRANSISTOR 2SA1162
Q85	8-729-100-66	s TRANSISTOR 2SC1623
Q86	8-729-200-87	s TRANSISTOR 2SC2714Y
Q87	8-729-403-32	s TRANSISTOR XN6435
Q89	8-729-200-87	s TRANSISTOR 2SC2714Y
Q90	8-729-403-32	s TRANSISTOR XN6534
Q91	8-729-100-66	s TRANSISTOR 2SC1623
Q93	8-729-100-66	s TRANSISTOR 2SC1623
Q94	8-729-100-66	s TRANSISTOR 2SC1623
Q95	8-729-403-32	s TRANSISTOR XN6534
Q96	8-729-100-66	s TRANSISTOR 2SC1623
Q98	8-729-100-66	s TRANSISTOR 2SC1623
Q99	8-729-100-66	s TRANSISTOR 2SC1623
Q100	8-729-216-22	s TRANSISTOR 2SA1162
Q101	8-729-216-22	s TRANSISTOR 2SA1162
Q102	8-729-100-66	s TRANSISTOR 2SC1623
Q103	8-729-200-87	s TRANSISTOR 2SC2714Y
Q104	8-729-200-87	s TRANSISTOR 2SC2714Y
Q105	8-765-930-08	s TRANSISTOR 3SK163-2
Q106	8-729-200-87	s TRANSISTOR 2SC2714Y
Q107	8-729-200-87	s TRANSISTOR 2SC2714Y
Q108	8-729-175-73	s TRANSISTOR 2SC2757
Q109	8-729-175-73	s TRANSISTOR 2SC2757
Q110	8-729-200-87	s TRANSISTOR 2SC2714Y

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Ref. No. or Q'ty	Part No.	SP Description
Q111	8-729-216-22	s TRANSISTOR 2SA1162
Q112	8-729-100-66	s TRANSISTOR 2SC1623
Q113	8-729-100-66	s TRANSISTOR 2SC1623
Q114	8-729-100-66	s TRANSISTOR 2SC1623
Q115	8-729-100-66	s TRANSISTOR 2SC1623
Q116	8-729-109-44	s TRANSISTOR 2SK94
Q117	8-729-100-66	s TRANSISTOR 2SC1623
Q118	8-729-109-44	s TRANSISTOR 2SK94
Q119	8-729-109-44	s TRANSISTOR 2SK94
Q120	8-729-403-32	s TRANSISTOR XN6534
Q121	8-729-100-66	s TRANSISTOR 2SC1623
Q123	8-729-403-32	s TRANSISTOR XN6534
Q124	8-729-100-66	s TRANSISTOR 2SC1623
Q126	8-729-100-66	s TRANSISTOR 2SC1623
Q127	8-729-200-87	s TRANSISTOR 2SC2714Y
Q128	8-729-100-66	s TRANSISTOR 2SC1623
Q129	8-729-100-66	s TRANSISTOR 2SC1623
Q130	8-729-100-66	s TRANSISTOR 2SC1623
Q131	8-729-403-32	s TRANSISTOR XN6534
Q133	8-729-100-66	s TRANSISTOR 2SC1623
Q134	8-765-930-08	s TRANSISTOR 3SK163-2
Q135	8-729-403-32	s TRANSISTOR XN6534
Q136	8-729-100-66	s TRANSISTOR 2SC1623
Q138	8-729-100-66	s TRANSISTOR 2SC1623
Q139	8-729-403-32	s TRANSISTOR XN6534
Q141	8-729-403-29	s TRANSISTOR XN6435
Q143	8-729-403-32	s TRANSISTOR XN6534
Q145	8-729-200-87	s TRANSISTOR 2SC2714Y
Q146	8-729-200-87	s TRANSISTOR 2SC2714Y
Q147	8-729-100-66	s TRANSISTOR 2SC1623
Q148	8-729-100-66	s TRANSISTOR 2SC1623
Q149	8-765-930-08	s TRANSISTOR 3SK163-2
Q150	8-729-216-22	s TRANSISTOR 2SA1162
Q151	8-729-100-66	s TRANSISTOR 2SC1623
Q152	8-729-100-66	s TRANSISTOR 2SC1623
Q153	8-729-216-22	s TRANSISTOR 2SA1162
Q154	8-729-403-29	s TRANSISTOR XN6435
Q155	8-729-100-66	s TRANSISTOR 2SC1623
Q156	8-729-403-32	s TRANSISTOR XN6534
Q157	8-729-216-22	s TRANSISTOR 2SA1162
R1	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R2	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R3	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R4	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R5	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R6	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R7	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R8	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R9	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R10	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R11	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R14	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R18	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R20	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R21	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R25	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R26	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R39	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R40	1-216-633-11	s METAL CHIP 180 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(IE-26P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R43	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R44	1-216-636-11	s METAL CHIP 240 0.50% 1/10W
R46	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R48	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R49	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R50	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R51	1-216-647-11	s METAL CHIP 680 0.50% 1/10W
R52	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R55	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R57	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R58	1-216-652-11	s METAL CHIP 1.1K 0.50% 1/10W
R59	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R60	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R63	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R64	1-216-653-11	s METAL CHIP 1.2K 0.50% 1/10W
R65	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R66	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R69	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R71	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R72	1-216-652-11	s METAL CHIP 1.1K 0.50% 1/10W
R73	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R74	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R77	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R78	1-216-653-11	s METAL CHIP 1.2K 0.50% 1/10W
R79	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R80	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R84	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R85	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R88	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R90	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R91	1-216-652-11	s METAL CHIP 1.1K 0.50% 1/10W
R92	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R93	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R96	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R97	1-216-653-11	s METAL CHIP 1.2K 0.50% 1/10W
R98	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R99	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R129	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R130	1-216-629-11	s METAL CHIP 120 0.50% 1/10W
R133	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R136	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R137	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R138	1-216-647-11	s METAL CHIP 680 0.50% 1/10W
R139	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R146	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R147	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R150	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R151	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R153	1-218-259-11	s METAL CHIP 13.7K 0.50% 1/10W
R154	1-218-254-11	s METAL CHIP 2.55K 0.50% 1/10W
R155	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R156	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R157	1-216-649-11	s METAL CHIP 820 0.50% 1/10W
R158	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R160	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R161	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R162	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R163	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R164	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W

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Ref. No. or Q'ty	Part No.	SP Description
R165	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R167	1-218-257-11	s METAL CHIP 4.99K 0.50% 1/10W
R168	1-218-254-11	s METAL CHIP 2.55K 0.50% 1/10W
R169	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R170	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R171	1-216-649-11	s METAL CHIP 820 0.50% 1/10W
R172	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R176	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R177	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R178	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R179	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R186	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R187	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R190	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R194	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R195	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R199	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R203	1-216-653-11	s METAL CHIP 1.2K 0.50% 1/10W
R204	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R211	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R213	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R214	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R218	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R219	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R232	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R233	1-216-633-11	s METAL CHIP 180 0.50% 1/10W
R236	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R237	1-216-636-11	s METAL CHIP 240 0.50% 1/10W
R239	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R241	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R242	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R243	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R244	1-216-647-11	s METAL CHIP 680 0.50% 1/10W
R245	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R247	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R248	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R249	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R250	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R251	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R252	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R254	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R255	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R256	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R257	1-216-649-11	s METAL CHIP 820 0.50% 1/10W
R258	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R259	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R260	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R262	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R263	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R264	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R265	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R266	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R267	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R269	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R270	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R271	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R272	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R273	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R274	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(1E-26P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R275	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R276	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R277	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R278	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R279	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R280	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R282	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R283	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R284	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R285	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R286	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R310	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R311	1-216-629-11	s METAL CHIP 120 0.50% 1/10W
R314	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R317	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R318	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R319	1-216-647-11	s METAL CHIP 680 0.50% 1/10W
R320	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R327	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R328	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R331	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R332	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R334	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R335	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R336	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R338	1-216-656-11	s METAL CHIP 1.6K 0.50% 1/10W
R340	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R341	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R342	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R343	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R344	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R346	1-216-656-11	s METAL CHIP 1.6K 0.50% 1/10W
R347	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R349	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R351	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R352	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R359	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R360	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R362	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R363	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R364	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R365	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R372	1-216-629-11	s METAL CHIP 120 0.50% 1/10W
R373	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R374	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R375	1-216-629-11	s METAL CHIP 120 0.50% 1/10W
R386	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R387	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R397	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R398	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R399	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R402	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R424	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R425	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R428	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R429	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R436	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R437	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R439	1-216-644-11	s METAL CHIP 510 0.50% 1/10W

(1E-26P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R440	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R446	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R447	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R449	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R450	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R456	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R457	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R458	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R459	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R460	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R461	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R462	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R464	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R489	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R490	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
RV1	1-228-456-00	s RES. ADJ. METAL 1K
RV2	1-228-455-00	s RES. ADJ. METAL 500
RV7	1-228-458-00	s RES. ADJ. METAL 5K
RV9	1-228-460-00	s RES. ADJ. METAL 20K
RV10	1-228-460-00	s RES. ADJ. METAL 20K
RV11	1-228-459-00	s RES. ADJ. METAL 10K
RV12	1-228-459-00	s RES. ADJ. METAL 10K
RV13	1-228-459-00	s RES. ADJ. METAL 10K
RV14	1-228-455-00	s RES. ADJ. METAL 500
RV15	1-228-452-00	s RES. ADJ. METAL 50
RV16	1-228-452-00	s RES. ADJ. METAL 50
RV20	1-228-460-00	s RES. ADJ. METAL 20K
RV21	1-228-460-00	s RES. ADJ. METAL 20K
RV22	1-228-473-00	s RES. ADJ. METAL 5K
RV23	1-228-462-00	s RES. ADJ. METAL 100K
RV24	1-228-475-00	s RES. ADJ. METAL 20K
RV25	1-228-474-00	s RES. ADJ. METAL 10K
RV26	1-228-472-00	s RES. ADJ. METAL 2K
RV27	1-228-455-00	s RES. ADJ. METAL 500
RV28	1-228-473-00	s RES. ADJ. METAL 5K
RV29	1-228-456-00	s RES. ADJ. METAL 1K
RV30	1-228-455-00	s RES. ADJ. METAL 500
RV31	1-228-459-00	s RES. ADJ. METAL 10K
RV32	1-228-455-00	s RES. ADJ. METAL 500
S1	1-570-857-11	s SWITCH. SLIDE
S2	1-570-610-11	s SWITCH. TOGGLE
S3	1-570-857-11	s SWITCH. SLIDE
S4	1-570-857-11	s SWITCH. SLIDE

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

LF-15 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-626-820-11	o PRINTED CIRCUIT BOARD, LF-15
C1	1-136-203-11	s FILM 0.01uF 5% 630V
C2	1-136-206-11	s FILM 0.033uF 5% 630V
C3	1-136-203-11	s FILM 0.01uF 5% 630V
C4	1-136-203-11	s FILM 0.01uF 5% 630V
C5	1-136-203-11	s FILM 0.01uF 5% 630V
C6	1-136-203-11	s FILM 0.01uF 5% 630V
C7	1-136-203-11	s FILM 0.01uF 5% 630V
C8	1-136-203-11	s FILM 0.01uF 5% 630V
C9	1-136-203-11	s FILM 0.01uF 5% 630V
CN1	1-508-776-00	o CONNECTOR, 3P MALE
CN2	1-506-467-11	o CONNECTOR, 2P, MALE
CN3	1-508-776-00	o CONNECTOR, 3P MALE
L2	1-410-253-11	s COIL, CHOKO 80uH
L3	1-459-375-00	s COIL, CHOKO
L4	1-459-375-00	s COIL, CHOKO
L5	1-459-375-00	s COIL, CHOKO
L6	1-459-375-00	s COIL, CHOKO
L7	1-459-375-00	s COIL, CHOKO
L8	1-459-375-00	s COIL, CHOKO
L9	1-459-375-00	s COIL, CHOKO
L10	1-459-375-00	s COIL, CHOKO
L11	1-459-375-00	s COIL, CHOKO

LP-53 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-633-015-11	o PRINTED CIRCUIT BOARD, LP-53
1pc	2-280-622-11	o SUPPORT (M3), HEXAGON
1pc	7-682-903-01	s SCREW +PWH 3X5
1pc	7-685-533-14	s SCREW +BTP 2.6X6 TYPE2 N-S
D1	8-719-801-31	s DIODE TLG113A "DC OUT"
D2	8-719-801-31	s DIODE TLG113A "LENS"
D3	8-719-801-31	s DIODE TLG113A "VF"
D4	8-719-801-31	s DIODE TLG113A "-5.5V"
D5	8-719-801-31	s DIODE TLG113A "+5.5V"
D6	8-719-801-31	s DIODE TLG113A "+9.5V"
TM1	1-548-152-11	o HOUR METER, DIGITAL "TIMER"

MB-270 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-062-A	o MOUNTED CIRCUIT BOARD, MB-270
CN1	1-562-769-11	o CONNECTOR, MULTI 90P, FEMALE
CN2	1-562-769-11	o CONNECTOR, MULTI 90P, FEMALE
CN3	1-562-769-11	o CONNECTOR, MULTI 90P, FEMALE
CN4	1-562-769-11	o CONNECTOR, MULTI 90P, FEMALE
CN5	1-562-769-11	o CONNECTOR, MULTI 90P, FEMALE
CN6	1-562-769-11	o CONNECTOR, MULTI 90P, FEMALE
CN7	1-562-769-11	o CONNECTOR, MULTI 90P, FEMALE
CN8	1-562-769-11	o CONNECTOR, MULTI 90P, FEMALE
CN9	1-562-769-11	o CONNECTOR, MULTI 90P, FEMALE
CN10	1-506-643-11	o CONNECTOR, PS 28P, MALE
CN11	1-506-641-11	o CONNECTOR, 24P MALE
CN12	1-506-633-11	o CONNECTOR, 8P MALE
CN13	1-506-631-11	o CONNECTOR, 4P MALE
CN14	1-506-633-11	o CONNECTOR, 8P MALE
CN15	1-506-644-11	o CONNECTOR, PS 30P, MALE
CN16	1-506-637-11	o CONNECTOR, 16P MALE
CN17	1-506-633-11	o CONNECTOR, 8P MALE
CN18	1-506-634-11	o CONNECTOR, 10P MALE
CN19	1-506-631-11	o CONNECTOR, 4P MALE
CN20	1-506-633-11	o CONNECTOR, 8P MALE
CN21	1-506-638-11	o CONNECTOR, 18P MALE
CN22	1-506-640-11	o CONNECTOR, PS 22P, MALE
CN23	1-506-633-11	o CONNECTOR, 8P MALE
CN24	1-506-641-11	o CONNECTOR, 24P MALE
CN25	1-506-634-11	o CONNECTOR, 10P MALE
CN26	1-506-467-11	o CONNECTOR, 2P MALE

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

MD-67 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-075-A	o MOUNTED CIRCUIT BOARD, MD-67
1pc	2-251-622-00	o LEVER, PC BOARD
1pc	7-626-317-11	s PIN, SPRING 2.5X6
2pcs	7-628-254-40	s SCREW +PS 2.6X12
4pcs	7-682-902-01	s SCREW +PWH 2.6X4
C52	1-107-049-00	s MICA 8.2PF 0.5PF 500V
C76	1-102-965-00	s CERAMIC 39PF 5% 50V
C77	1-102-960-00	s CERAMIC 24PF 5% 50V
C78	1-102-960-00	s CERAMIC 24PF 5% 50V
C88	1-102-959-00	s CERAMIC 22PF 5% 50V
CN1	1-562-730-11	o CONNECTOR, MULTI 90P, MALE
CP1	1-577-202-11	s OSCILLATOR, CRYSTAL 36MHz
D1	8-719-119-52	s DIODE RD2.2ESL2
D2	8-719-118-38	s DIODE 1S746A
D3	8-719-101-64	s DIODE RD6.8EL2
D4	8-719-104-34	s DIODE 1S2836
D5	8-719-101-64	s DIODE RD6.8EL2
FB1	1-535-178-00	s RES. FERRITE
FB2	1-535-178-00	s RES. FERRITE
FB3	1-535-178-00	s RES. FERRITE
FB4	1-535-178-00	s RES. FERRITE
FL1	1-239-084-11	s LOW PASS 9MHz
FL2	1-235-570-11	s BAND PASS 18MHz
FL3	1-236-278-11	s LOW PASS 36MHz
FL4	1-236-636-11	s LPF, CHROMA
FL5	1-415-436-11	s PHASE SHIFT 36uH
FL6	1-236-636-11	s LPF, CHROMA
IC1	8-759-906-54	s IC TL064CNS
IC2	8-759-981-51	s IC RC1496M
IC3	8-759-948-03	s IC 74F175SJ
IC4	8-759-981-51	s IC RC1496M
IC5	8-759-981-51	s IC RC1496M
IC6	8-759-201-61	s IC TC40H004F
LV1	1-412-150-11	s MICRO INDUCTOR 0.12UH
Q1	8-729-105-29	s TRANSISTOR 2SA1385
Q2	8-729-105-29	s TRANSISTOR 2SA1385
Q3	8-729-105-19	s TRANSISTOR 2SC3518
Q4	8-729-100-66	s TRANSISTOR 2SC1623
Q5	8-729-216-22	s TRANSISTOR 2SA1162
Q6	8-729-175-72	s TRANSISTOR 2SC2757
Q7	8-729-112-65	s TRANSISTOR 2SA1462
Q8	8-729-200-87	s TRANSISTOR 2SC2714Y
Q9	8-729-122-63	s TRANSISTOR 2SA1226
Q10	8-729-200-87	s TRANSISTOR 2SC2714Y
Q11	8-729-122-63	s TRANSISTOR 2SA1226
Q12	8-729-200-87	s TRANSISTOR 2SC2714Y
Q13	8-729-216-22	s TRANSISTOR 2SA1162
Q14	8-729-216-22	s TRANSISTOR 2SA1162
Q15	8-729-200-87	s TRANSISTOR 2SC2714Y
Q16	8-729-122-63	s TRANSISTOR 2SA1226
Q17	8-729-200-87	s TRANSISTOR 2SC2714Y
Q18	8-729-216-22	s TRANSISTOR 2SA1162
Q19	8-729-175-72	s TRANSISTOR 2SC2757
Q20	8-729-112-65	s TRANSISTOR 2SA1462
Q21	8-729-200-87	s TRANSISTOR 2SC2714Y

(MD-67 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q22	8-729-200-87	s TRANSISTOR 2SC2714Y
Q23	8-729-122-63	s TRANSISTOR 2SA1226
Q24	8-729-122-63	s TRANSISTOR 2SA1226
Q25	8-729-200-87	s TRANSISTOR 2SC2714Y
Q26	8-729-216-22	s TRANSISTOR 2SA1162
Q27	8-729-216-22	s TRANSISTOR 2SA1162
Q28	8-729-216-22	s TRANSISTOR 2SA1162
Q29	8-729-216-22	s TRANSISTOR 2SA1162
Q30	8-729-216-22	s TRANSISTOR 2SA1162
Q31	8-729-216-22	s TRANSISTOR 2SA1162
Q32	8-729-216-22	s TRANSISTOR 2SA1162
Q34	8-729-200-87	s TRANSISTOR 2SC2714Y
Q35	8-729-200-87	s TRANSISTOR 2SC2714Y
Q36	8-729-112-65	s TRANSISTOR 2SA1462
R1	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R2	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R3	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R4	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R5	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R6	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R7	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R8	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R9	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R10	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R11	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R12	1-216-684-11	s METAL CHIP 24K 0.50% 1/10W
R13	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R22	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R23	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R24	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R25	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R27	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R28	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R29	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R30	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R31	1-216-648-11	s METAL CHIP 750 0.50% 1/10W
R32	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R34	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R39	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R45	1-216-624-11	s METAL CHIP 75 0.50% 1/10W
R46	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R48	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R50	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R51	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R63	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R66	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R67	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R68	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R70	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R72	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R73	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R74	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R75	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R77	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R78	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R79	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R80	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R81	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R83	1-216-643-11	s METAL CHIP 470 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(MD-67 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R84	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R85	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R87	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R90	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R93	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R99	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R101	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R115	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R116	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R123	1-216-624-11	s METAL CHIP 75 0.50% 1/10W
R124	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R125	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R126	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R127	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R132	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R133	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R134	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R143	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R146	1-216-652-11	s METAL CHIP 1.1K 0.50% 1/10W
R148	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R149	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R150	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R151	1-216-649-11	s METAL CHIP 820 0.50% 1/10W
RV1	1-228-456-00	s RES. ADJ. METAL 1K
RV2	1-228-457-00	s RES. ADJ. METAL 2K
RV3	1-228-459-00	s RES. ADJ. METAL 10K
RV4	1-228-459-00	s RES. ADJ. METAL 10K
RV5	1-228-456-00	s RES. ADJ. METAL 1K
RV6	1-228-455-00	s RES. ADJ. METAL 500
RV7	1-228-455-00	s RES. ADJ. METAL 500
RV8	1-228-459-00	s RES. ADJ. METAL 10K
RV9	1-228-455-00	s RES. ADJ. METAL 500
RV10	1-228-455-00	s RES. ADJ. METAL 500
RV11	1-228-461-00	s RES. ADJ. METAL 50K

MS-33 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-068-A	o MOUNTED CIRCUIT BOARD, MS-33 Ser. No Up to 41125
	A-7515-322-A	o MOUNTED CIRCUIT BOARD, MS-33P Ser. No 41201 AND HIGHER
1pc	2-251-622-00	o LEVER, PC BOARD
10pcs	3-621-124-00	o SPACER
1pc	7-626-317-11	s PIN, SPRING 2.5X6
2pcs	7-628-254-40	s SCREW +PS 2.6X12
4pcs	7-682-902-01	s SCREW +PWH 2.6X4
2pcs	8-759-748-67	s IC UPD27C512G-20
C24	1-130-470-00	s MYLAR 820PF 5% 50V
C37	1-130-487-00	s MYLAR 0.022uF 5% 50V
C40	1-130-499-00	s MYLAR 0.22uF 5% 50V
C49	1-163-011-11	s CERAMIC CHIP 0.0015uF 10% 50V
C50	1-163-011-11	s CERAMIC CHIP 0.0015uF 10% 50V
C140	1-163-086-00	s CERAMIC CHIP 3PF 0.25PF 50V
C141	1-163-086-00	s CERAMIC CHIP 3PF 0.25PF 50V
C142	1-163-086-00	s CERAMIC CHIP 3PF 0.25PF 50V
C51	1-163-011-11	s CERAMIC CHIP 0.0015uF 10% 50V
CN1	1-562-730-11	o CONNECTOR, MULTI 90P, MALE
D1	8-719-921-12	s DIODE HZ2BL
D2	8-719-118-38	s DIODE 1S745A
D3	8-719-101-64	s DIODE RD6.8EL2
D4	8-719-101-64	s DIODE RD6.8EL2
D5	8-719-101-64	s DIODE RD6.8EL2
D10	8-719-104-34	s DIODE 1S2836
D11	8-719-104-34	s DIODE 1S2836
D12	8-719-911-19	s DIODE 1SS119
IC1	8-759-906-54	s IC TL064CNS
IC2	8-759-972-26	s IC LM1881N
IC3	8-759-201-53	s IC TC40H000F
IC4	8-759-009-07	s IC MC14053BF
IC5	8-759-906-54	s IC TL064CNS
IC6	8-759-100-97	s IC UPC339G2
IC7	8-759-100-97	s IC UPC339G2
IC8	8-759-906-54	s IC TL064CNS
IC9	8-759-100-97	s IC UPC339G2
IC10	8-759-009-51	s IC MC14538BF
IC11	8-759-201-53	s IC TC40H000F
IC12	8-759-906-54	s IC TL064CNS
IC13	8-759-201-53	s IC TC40H000F
IC14	8-759-008-98	s IC MC14040BF
IC15	8-759-737-47	s IC 27C512G-20-370CURSOR
IC16	8-759-201-60	s IC TC40H002F
IC17	8-759-201-64	s IC TC40H074F
IC18	8-759-201-60	s IC TC40H002F
IC19	8-759-201-64	s IC TC40H074F
IC20	8-759-201-60	s IC TC40H002F
IC21	8-759-201-53	s IC TC40H000F
IC22	8-759-204-75	s IC TC40H175F
IC23	8-759-201-60	s IC TC40H002F
IC24	8-759-927-02	s IC SN74HC7266NS
IC25	8-759-201-60	s IC TC40H002F
IC26	8-759-201-60	s IC TC40H002F
IC27	8-759-201-60	s IC TC40H002F
IC28	8-759-201-60	s IC TC40H002F
IC29	8-759-204-74	s IC TC40H174F
IC30	8-759-738-56	s IC 27C512G370MONISEL2

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(MS-33 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC31	8-759-201-61	s IC TC40H004F
IC32	8-759-201-60	s IC TC40H002F
IC33	8-759-100-97	s IC UPC339G2
IC34	8-759-009-07	s IC MC14053BF
IC37	8-759-201-53	s IC TC40H000F
IC38	8-759-201-60	s IC TC40H002F
IC39	8-741-135-60	s IC BX1356
IC40	8-741-135-60	s IC BX1356
IC41	8-741-135-60	s IC BX1356
IC42	8-741-135-60	s IC BX1356
IC43	8-759-201-53	s IC TC40H000F
IC44	8-759-239-23	s IC SN74HC86NS
IC45	8-759-201-60	s IC TC40H002F
IC46	8-759-204-51	s IC TC40H008F
IC47	8-759-209-54	s IC TC4S01F
IC48	8-741-135-60	s IC BX1356
IC49	8-759-234-20	s IC TC7S08F
IC50	8-759-209-97	s IC TC4S81F
IC51	8-759-209-97	s IC TC4S81F
Q1	8-729-105-29	s TRANSISTOR 2SA1385
Q2	8-729-105-29	s TRANSISTOR 2SA1385
Q3	8-729-105-19	s TRANSISTOR 2SC3518
Q4	8-729-100-66	s TRANSISTOR 2SC1623
Q6	8-729-216-22	s TRANSISTOR 2SA1162
Q7	8-729-216-22	s TRANSISTOR 2SA1162
Q8	8-729-216-22	s TRANSISTOR 2SA1162
Q9	8-729-216-22	s TRANSISTOR 2SA1162
Q10	8-729-216-22	s TRANSISTOR 2SA1162
Q12	8-729-100-66	s TRANSISTOR 2SC1623
Q13	8-729-100-66	s TRANSISTOR 2SC1623
Q14	8-729-100-66	s TRANSISTOR 2SC1623
Q15	8-729-216-22	s TRANSISTOR 2SA1162
Q16	8-729-216-22	s TRANSISTOR 2SA1162
Q17	8-729-216-22	s TRANSISTOR 2SA1162
Q18	8-729-216-22	s TRANSISTOR 2SA1162
Q19	8-729-216-22	s TRANSISTOR 2SA1162
Q20	8-729-100-66	s TRANSISTOR 2SC1623
Q21	8-729-162-43	s TRANSISTOR 2SB624-BV3
Q22	8-729-100-66	s TRANSISTOR 2SC1623
Q23	8-729-216-22	s TRANSISTOR 2SA1162
Q24	8-729-216-22	s TRANSISTOR 2SA1162
Q25	8-729-100-66	s TRANSISTOR 2SC1623
Q26	8-729-100-66	s TRANSISTOR 2SC1623
Q27	8-729-100-66	s TRANSISTOR 2SC1623
Q28	8-729-100-66	s TRANSISTOR 2SC1623
Q29	8-729-216-22	s TRANSISTOR 2SA1162
Q30	8-729-216-22	s TRANSISTOR 2SA1162
Q31	8-729-101-25	s TRANSISTOR 2SC1009A
Q32	8-729-122-63	s TRANSISTOR 2SA1226
Q33	8-729-122-63	s TRANSISTOR 2SA1226
Q34	8-729-101-25	s TRANSISTOR 2SC1009A
Q35	8-729-216-22	s TRANSISTOR 2SA1162
Q36	8-729-100-66	s TRANSISTOR 2SC1623
Q37	8-729-216-22	s TRANSISTOR 2SA1162
Q38	8-729-216-22	s TRANSISTOR 2SA1162
Q39	8-729-100-66	s TRANSISTOR 2SC1623
Q40	8-729-100-66	s TRANSISTOR 2SC1623
Q41	8-729-100-66	s TRANSISTOR 2SC1623
Q42	8-729-100-66	s TRANSISTOR 2SC1623

(MS-33 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q43	8-729-216-22	s TRANSISTOR 2SA1162
Q44	8-729-216-22	s TRANSISTOR 2SA1162
Q45	8-729-101-25	s TRANSISTOR 2SC1009A
Q46	8-729-122-63	s TRANSISTOR 2SA1226
Q47	8-729-122-63	s TRANSISTOR 2SA1226
Q48	8-729-101-25	s TRANSISTOR 2SC1009A
Q49	8-729-216-22	s TRANSISTOR 2SA1162
Q50	8-729-216-22	s TRANSISTOR 2SA1162
Q51	8-729-216-22	s TRANSISTOR 2SA1162
Q52	8-729-100-66	s TRANSISTOR 2SC1623
Q53	8-729-100-66	s TRANSISTOR 2SC1623
Q54	8-729-100-66	s TRANSISTOR 2SC1623
Q55	8-729-159-64	s TRANSISTOR 2SD596
Q56	8-729-100-66	s TRANSISTOR 2SC1623
Q57	8-729-216-22	s TRANSISTOR 2SA1162
Q58	8-729-216-22	s TRANSISTOR 2SA1162
Q59	8-729-100-66	s TRANSISTOR 2SC1623
Q60	8-729-100-66	s TRANSISTOR 2SC1623
Q61	8-729-100-66	s TRANSISTOR 2SC1623
Q62	8-729-100-66	s TRANSISTOR 2SC1623
Q63	8-729-216-22	s TRANSISTOR 2SA1162
Q64	8-729-216-22	s TRANSISTOR 2SA1162
Q65	8-729-101-25	s TRANSISTOR 2SC1009A
Q66	8-729-122-63	s TRANSISTOR 2SA1226
Q67	8-729-122-63	s TRANSISTOR 2SA1226
Q68	8-729-101-25	s TRANSISTOR 2SC1009A
Q69	8-729-100-66	s TRANSISTOR 2SC1623
Q70	8-729-105-29	s TRANSISTOR 2SA1385
Q71	8-729-100-66	s TRANSISTOR 2SC1623
Q72	8-769-401-67	s TRANSISTOR 3SK163-1
Q73	8-769-401-67	s TRANSISTOR 3SK163-1
Q74	8-769-401-67	s TRANSISTOR 3SK163-1
Q75	8-769-401-67	s TRANSISTOR 3SK163-1
Q76	8-769-401-67	s TRANSISTOR 3SK163-1
Q77	8-729-100-66	s TRANSISTOR 2SC1623
Q78	8-729-216-22	s TRANSISTOR 2SA1162
Q79	8-729-100-66	s TRANSISTOR 2SC1623
Q80	8-729-216-22	s TRANSISTOR 2SA1162
Q81	8-729-216-22	s TRANSISTOR 2SA1162
Q82	8-729-100-66	s TRANSISTOR 2SC1623
R1	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R2	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R3	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R4	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R5	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R6	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R7	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R8	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R9	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R10	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R16	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R17	1-216-693-11	s METAL CHIP 56K 0.50% 1/10W
R18	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R19	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R20	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R21	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R22	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R23	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R24	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(MS-33 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R27	1-216-638-11	s METAL CHIP 300 0.50% 1/10W
R28	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R29	1-216-638-11	s METAL CHIP 300 0.50% 1/10W
R31	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R32	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R33	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R34	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R35	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R36	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R38	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R39	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R40	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R41	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R42	1-216-636-11	s METAL CHIP 240 0.50% 1/10W
R43	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R53	1-216-693-11	s METAL CHIP 56K 0.50% 1/10W
R54	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R55	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R56	1-216-690-11	s METAL CHIP 43K 0.50% 1/10W
R57	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R58	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R59	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R60	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R67	1-216-688-11	s METAL CHIP 36K 0.50% 1/10W
R72	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R73	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R74	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R75	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R76	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R77	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R78	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R79	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R80	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R115	1-216-680-11	s METAL CHIP 18K 0.50% 1/10W
R116	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R117	1-216-680-11	s METAL CHIP 16K 0.50% 1/10W
R118	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R130	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R131	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R132	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R133	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R134	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R135	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R136	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R137	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R138	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R139	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R140	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R141	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R142	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R143	1-216-638-11	s METAL CHIP 300 0.50% 1/10W
R144	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R145	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R146	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R147	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R148	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R155	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R158	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R160	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W

(MS-33 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R161	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R162	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R163	1-216-624-11	s METAL CHIP 75 0.50% 1/10W
R164	1-216-624-11	s METAL CHIP 75 0.50% 1/10W
R187	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R188	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R195	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R196	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R197	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R199	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R200	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R201	1-216-624-11	s METAL CHIP 75 0.50% 1/10W
R223	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R224	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R238	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R242	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R243	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R244	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R245	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R247	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R248	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R249	1-216-624-11	s METAL CHIP 75 0.50% 1/10W
R270	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R271	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R278	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R279	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R280	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R282	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R283	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R284	1-216-624-11	s METAL CHIP 75 0.50% 1/10W
R324	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R341	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R342	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R343	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
RB1	1-239-024-11	s MATRIX
RV1	1-228-456-00	s RES. ADJ. METAL 1K
RV2	1-228-459-00	s RES. ADJ. METAL 10K
RV3	1-228-457-00	s RES. ADJ. METAL 2K
RV4	1-228-460-00	s RES. ADJ. METAL 20K
RV5	1-228-474-00	s RES. ADJ. METAL 10K
RV6	1-228-459-00	s RES. ADJ. METAL 10K
RV7	1-228-457-00	s RES. ADJ. METAL 2K
RV8	1-228-460-00	s RES. ADJ. METAL 20K
RV9	1-228-473-00	s RES. ADJ. METAL 5K
RV10	1-228-456-00	s RES. ADJ. METAL 1K
RV15	1-228-456-00	s RES. ADJ. METAL 1K
RV16	1-228-456-00	s RES. ADJ. METAL 1K
RV17	1-228-456-00	s RES. ADJ. METAL 1K
RV18	1-228-460-00	s RES. ADJ. METAL 20K
RV19	1-228-456-00	s RES. ADJ. METAL 1K
S1	1-570-610-11	s SWITCH. TOGGLE
S2	1-570-612-11	s SWITCH. TOGGLE
S3	1-570-610-11	s SWITCH. TOGGLE
S4	1-553-252-00	s SWITCH. ROTARY
S5	1-570-610-11	s SWITCH. TOGGLE
S6	1-570-610-11	s SWITCH. TOGGLE
S7	1-570-610-11	s SWITCH. TOGGLE
S8	1-570-857-11	s SWITCH. SLIDE

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

PR-130 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-067-A	o MOUNTED CIRCUIT BOARD, PR-130
1pc	2-251-622-00	o LEVER, PC BOARD
24pcs	3-621-124-00	o SPACER
1pc	7-626-317-11	s PIN, SPRING 2.5X6
2pcs	7-628-254-40	s SCREW +PS 2.6X12
4pcs	7-682-902-01	s SCREW +PWH 2.6X4
C28	1-163-082-00	s CERAMIC CHIP 0.5PF 0.25PF 50V
C30	1-163-084-00	s CERAMIC CHIP 1.5PF 0.25PF 50V
C35	1-135-216-11	s TANTALUM CHIP 10uF 10% 10V
C36	1-135-216-11	s TANTALUM CHIP 10uF 10% 10V
C44	1-163-082-00	s CERAMIC CHIP 0.5PF 0.25PF 50V
C46	1-163-084-00	s CERAMIC CHIP 1.5PF 0.25PF 50V
C65	1-163-082-00	s CERAMIC CHIP 0.5PF 0.25PF 50V
C67	1-163-084-00	s CERAMIC CHIP 1.5PF 0.25PF 50V
C72	1-135-216-11	s TANTALUM CHIP 10uF 10% 10V
C73	1-135-216-11	s TANTALUM CHIP 10uF 10% 10V
C81	1-163-082-00	s CERAMIC CHIP 0.5PF 0.25PF 50V
C82	1-163-084-00	s CERAMIC CHIP 1.5PF 0.25PF 50V
C100	1-163-082-00	s CERAMIC CHIP 0.5PF 0.25PF 50V
C102	1-163-084-00	s CERAMIC CHIP 1.5PF 0.25PF 50V
C107	1-135-216-11	s TANTALUM CHIP 10uF 10% 10V
C108	1-135-216-11	s TANTALUM CHIP 10uF 10% 10V
C116	1-163-082-00	s CERAMIC CHIP 0.5PF 0.25PF 50V
C117	1-163-084-00	s CERAMIC CHIP 1.5PF 0.25PF 50V
C157	1-135-153-21	s TANTALUM CHIP 2.2uF 10% 20V
C158	1-135-153-21	s TANTALUM CHIP 2.2uF 10% 20V
C159	1-135-153-21	s TANTALUM CHIP 2.2uF 10% 20V
C160	1-135-153-21	s TANTALUM CHIP 2.2uF 10% 20V
C161	1-135-153-21	s TANTALUM CHIP 2.2uF 10% 20V
C162	1-135-153-21	s TANTALUM CHIP 2.2uF 10% 20V
C163	1-135-153-21	s TANTALUM CHIP 2.2uF 10% 20V
C172	1-135-153-21	s TANTALUM CHIP 2.2uF 10% 20V
C173	1-135-153-21	s TANTALUM CHIP 2.2uF 10% 20V
C174	1-135-153-21	s TANTALUM CHIP 2.2uF 10% 20V
C175	1-135-153-21	s TANTALUM CHIP 2.2uF 10% 20V
C176	1-135-153-21	s TANTALUM CHIP 2.2uF 10% 20V
C177	1-135-161-21	s TANTALUM CHIP 22uF 10% 10V
C178	1-135-161-21	s TANTALUM CHIP 22uF 10% 10V
C179	1-135-161-21	s TANTALUM CHIP 22uF 10% 10V
C186	1-163-086-00	s CERAMIC CHIP 3PF 0.25PF 50V
C187	1-163-086-00	s CERAMIC CHIP 3PF 0.25PF 50V
C188	1-163-086-00	s CERAMIC CHIP 3PF 0.25PF 50V
C193	1-163-086-00	s CERAMIC CHIP 3PF 0.25PF 50V
C194	1-163-086-00	s CERAMIC CHIP 3PF 0.25PF 50V
CN1	1-562-730-11	o CONNECTOR, MULTI 90P, MALE
D1	8-719-921-12	s DIODE HZ2BL1
D2	8-719-118-38	s DIODE 1S746A
D3	8-719-101-64	s DIODE RD6.8EL2
D4	8-719-101-64	s DIODE RD6.8EL2
D5	8-719-800-76	s DIODE 1SS226
D6	8-719-800-76	s DIODE 1SS226
D7	8-719-800-76	s DIODE 1SS226
D8	8-719-948-47	s DIODE HSM88AS
D9	8-719-948-47	s DIODE HSM88AS
D10	8-719-104-34	s DIODE 1S2836
D11	8-719-800-76	s DIODE 1SS226

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Ref. No. or Q'ty	Part No.	SP Description
DL1	1-415-599-11	s DELAY LINE (AT-30)
IC1	8-759-906-54	s IC TL064CNS
IC2	8-741-108-20	s IC BX1082
IC3	8-759-981-51	s IC RC1496M
IC4	8-741-130-50	s IC BX1305
IC5	8-741-108-20	s IC BX1082
IC6	8-759-920-01	s IC SL3127C-DP
IC7	8-759-981-51	s IC RC1496M
IC8	8-741-130-40	s IC BX1304
IC9	8-741-108-20	s IC BX1082
IC10	8-741-108-20	s IC BX1082
IC11	8-759-981-51	s IC RC1496M
IC12	8-741-130-50	s IC BX1305
IC13	8-741-108-20	s IC BX1082
IC14	8-759-920-01	s IC SL3127C-DP
IC15	8-759-981-51	s IC RC1496M
IC16	8-741-130-40	s IC BX1304
IC17	8-741-108-20	s IC BX1082
IC18	8-741-108-20	s IC BX1082
IC19	8-759-981-51	s IC RC1496M
IC20	8-741-130-50	s IC BX1305
IC21	8-741-108-20	s IC BX1082
IC22	8-759-920-01	s IC SL3127C-DP
IC23	8-759-981-51	s IC RC1496M
IC24	8-741-130-40	s IC BX1304
IC25	8-741-108-20	s IC BX1082
IC26	8-759-906-53	s IC TL062CPS
IC27	8-759-009-07	s IC MC14053BF
IC28	8-759-906-53	s IC TL062CPS
IC29	8-759-009-07	s IC MC14053BF
IC30	8-759-009-07	s IC MC14053BF
IC31	8-759-147-84	s IC CXD8072Q
IC32	8-759-994-64	s IC MB88341PF
IC33	8-759-906-54	s IC TL064CNS
IC34	8-759-906-54	s IC TL064CNS
IC35	8-759-906-54	s IC TL064CNS
IC36	8-759-009-07	s IC MC14053BF
IC37	8-759-100-97	s IC UPC339G2
IC39	8-759-209-90	s IC TC4S71F
IC40	8-759-209-97	s IC TC4S81F
Q1	8-729-105-29	s TRANSISTOR 2SA1385
Q2	8-729-105-29	s TRANSISTOR 2SA1385
Q3	8-729-105-19	s TRANSISTOR 2SC3518
Q4	8-729-200-87	s TRANSISTOR 2SC2714Y
Q5	8-729-122-63	s TRANSISTOR 2SA1226
Q6	8-729-122-63	s TRANSISTOR 2SA1226
Q7	8-729-101-25	s TRANSISTOR 2SC1009A
Q8	8-729-109-44	s TRANSISTOR 2SK94
Q9	8-729-109-44	s TRANSISTOR 2SK94
Q10	8-729-101-25	s TRANSISTOR 2SC1009A
Q11	8-729-216-22	s TRANSISTOR 2SA1162
Q12	8-729-216-22	s TRANSISTOR 2SA1162
Q13	8-729-216-22	s TRANSISTOR 2SA1162
Q14	8-729-216-22	s TRANSISTOR 2SA1162
Q15	8-729-101-25	s TRANSISTOR 2SC1009A
Q16	8-729-101-25	s TRANSISTOR 2SC1009A
Q17	8-729-122-63	s TRANSISTOR 2SA1226
Q18	8-729-122-63	s TRANSISTOR 2SA1226

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(PR-130 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
Q19	8-729-122-63	s	TRANSISTOR 2SA1226
Q20	8-729-122-63	s	TRANSISTOR 2SA1226
Q21	8-729-122-63	s	TRANSISTOR 2SA1226
Q22	8-729-122-63	s	TRANSISTOR 2SA1226
Q23	8-729-101-25	s	TRANSISTOR 2SC1009A
Q24	8-729-109-44	s	TRANSISTOR 2SK94
Q25	8-729-216-22	s	TRANSISTOR 2SA1162
Q26	8-729-216-22	s	TRANSISTOR 2SA1162
Q27	8-729-216-22	s	TRANSISTOR 2SA1162
Q28	8-729-216-22	s	TRANSISTOR 2SA1162
Q29	8-729-216-22	s	TRANSISTOR 2SA1162
Q30	8-729-216-22	s	TRANSISTOR 2SA1162
Q31	8-729-100-66	s	TRANSISTOR 2SC1623
Q32	8-729-100-66	s	TRANSISTOR 2SC1623
Q33	8-729-100-66	s	TRANSISTOR 2SC1623
Q34	8-729-216-22	s	TRANSISTOR 2SA1162
Q35	8-729-216-22	s	TRANSISTOR 2SA1162
Q36	8-729-216-22	s	TRANSISTOR 2SA1162
Q37	8-729-100-66	s	TRANSISTOR 2SC1623
Q38	8-729-100-66	s	TRANSISTOR 2SC1623
Q39	8-729-216-22	s	TRANSISTOR 2SA1162
Q40	8-729-216-22	s	TRANSISTOR 2SA1162
Q41	8-729-216-22	s	TRANSISTOR 2SA1162
Q42	8-729-100-66	s	TRANSISTOR 2SC1623
Q43	8-729-100-66	s	TRANSISTOR 2SC1623
Q44	8-729-216-22	s	TRANSISTOR 2SA1162
Q45	8-729-216-22	s	TRANSISTOR 2SA1162
Q46	8-729-100-66	s	TRANSISTOR 2SC1623
Q47	8-729-100-66	s	TRANSISTOR 2SC1623
Q48	8-729-216-22	s	TRANSISTOR 2SA1162
Q49	8-729-100-66	s	TRANSISTOR 2SC1623
Q50	8-729-200-87	s	TRANSISTOR 2SC2714Y
Q51	8-729-122-63	s	TRANSISTOR 2SA1226
Q52	8-729-122-63	s	TRANSISTOR 2SA1226
Q53	8-729-101-25	s	TRANSISTOR 2SC1009A
Q54	8-729-109-44	s	TRANSISTOR 2SK94
Q55	8-729-109-44	s	TRANSISTOR 2SK94
Q56	8-729-101-25	s	TRANSISTOR 2SC1009A
Q57	8-729-216-22	s	TRANSISTOR 2SA1162
Q58	8-729-216-22	s	TRANSISTOR 2SA1162
Q59	8-729-216-22	s	TRANSISTOR 2SA1162
Q60	8-729-216-22	s	TRANSISTOR 2SA1162
Q61	8-729-101-25	s	TRANSISTOR 2SC1009A
Q62	8-729-101-25	s	TRANSISTOR 2SC1009A
Q63	8-729-122-63	s	TRANSISTOR 2SA1226
Q64	8-729-122-63	s	TRANSISTOR 2SA1226
Q65	8-729-122-63	s	TRANSISTOR 2SA1226
Q66	8-729-122-63	s	TRANSISTOR 2SA1226
Q67	8-729-122-63	s	TRANSISTOR 2SA1226
Q68	8-729-122-63	s	TRANSISTOR 2SA1226
Q69	8-729-101-25	s	TRANSISTOR 2SC1009A
Q70	8-729-109-44	s	TRANSISTOR 2SK94
Q71	8-729-216-22	s	TRANSISTOR 2SA1162
Q72	8-729-216-22	s	TRANSISTOR 2SA1162
Q73	8-729-216-22	s	TRANSISTOR 2SA1162
Q74	8-729-216-22	s	TRANSISTOR 2SA1162
Q75	8-729-216-22	s	TRANSISTOR 2SA1162
Q76	8-729-216-22	s	TRANSISTOR 2SA1162
Q77	8-729-100-66	s	TRANSISTOR 2SC1623

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Ref. No. or Q'ty	Part No.	SP	Description
Q78	8-729-100-66	s	TRANSISTOR 2SC1623
Q79	8-729-100-66	s	TRANSISTOR 2SC1623
Q80	8-729-216-22	s	TRANSISTOR 2SA1162
Q81	8-729-216-22	s	TRANSISTOR 2SA1162
Q82	8-729-216-22	s	TRANSISTOR 2SA1162
Q83	8-729-100-66	s	TRANSISTOR 2SC1623
Q84	8-729-216-22	s	TRANSISTOR 2SA1162
Q85	8-729-100-66	s	TRANSISTOR 2SC1623
Q86	8-729-216-22	s	TRANSISTOR 2SA1162
Q87	8-729-216-22	s	TRANSISTOR 2SA1162
Q88	8-729-100-66	s	TRANSISTOR 2SC1623
Q89	8-729-100-66	s	TRANSISTOR 2SC1623
Q90	8-729-216-22	s	TRANSISTOR 2SA1162
Q91	8-729-216-22	s	TRANSISTOR 2SA1162
Q92	8-729-100-66	s	TRANSISTOR 2SC1623
Q93	8-729-100-66	s	TRANSISTOR 2SC1623
Q94	8-729-216-22	s	TRANSISTOR 2SA1162
Q95	8-729-100-66	s	TRANSISTOR 2SC1623
Q96	8-729-200-87	s	TRANSISTOR 2SC2714Y
Q97	8-729-122-63	s	TRANSISTOR 2SA1226
Q98	8-729-122-63	s	TRANSISTOR 2SA1226
Q99	8-729-101-25	s	TRANSISTOR 2SC1009A
Q100	8-729-109-44	s	TRANSISTOR 2SK94
Q101	8-729-109-44	s	TRANSISTOR 2SK94
Q102	8-729-101-25	s	TRANSISTOR 2SC1009A
Q103	8-729-216-22	s	TRANSISTOR 2SA1162
Q104	8-729-216-22	s	TRANSISTOR 2SA1162
Q105	8-729-216-22	s	TRANSISTOR 2SA1162
Q106	8-729-216-22	s	TRANSISTOR 2SA1162
Q107	8-729-101-25	s	TRANSISTOR 2SC1009A
Q108	8-729-101-25	s	TRANSISTOR 2SC1009A
Q109	8-729-122-63	s	TRANSISTOR 2SA1226
Q110	8-729-122-63	s	TRANSISTOR 2SA1226
Q111	8-729-122-63	s	TRANSISTOR 2SA1226
Q112	8-729-122-63	s	TRANSISTOR 2SA1226
Q113	8-729-122-63	s	TRANSISTOR 2SA1226
Q114	8-729-122-63	s	TRANSISTOR 2SA1226
Q115	8-729-101-25	s	TRANSISTOR 2SC1009A
Q116	8-729-109-44	s	TRANSISTOR 2SK94
Q117	8-729-216-22	s	TRANSISTOR 2SA1162
Q118	8-729-216-22	s	TRANSISTOR 2SA1162
Q119	8-729-216-22	s	TRANSISTOR 2SA1162
Q120	8-729-216-22	s	TRANSISTOR 2SA1162
Q121	8-729-216-22	s	TRANSISTOR 2SA1162
Q122	8-729-216-22	s	TRANSISTOR 2SA1162
Q123	8-729-100-66	s	TRANSISTOR 2SC1623
Q124	8-729-100-66	s	TRANSISTOR 2SC1623
Q125	8-729-100-66	s	TRANSISTOR 2SC1623
Q126	8-729-216-22	s	TRANSISTOR 2SA1162
Q127	8-729-216-22	s	TRANSISTOR 2SA1162
Q128	8-729-216-22	s	TRANSISTOR 2SA1162
Q129	8-729-100-66	s	TRANSISTOR 2SC1623
Q130	8-729-216-22	s	TRANSISTOR 2SA1162
Q131	8-729-100-66	s	TRANSISTOR 2SC1623
Q132	8-729-216-22	s	TRANSISTOR 2SA1162
Q133	8-729-216-22	s	TRANSISTOR 2SA1162
Q134	8-729-100-66	s	TRANSISTOR 2SC1623
Q135	8-729-100-66	s	TRANSISTOR 2SC1623
Q136	8-729-216-22	s	TRANSISTOR 2SA1162

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(PR-130 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
Q137	8-729-216-22	s	TRANSISTOR 2SA1162
Q138	8-729-100-66	s	TRANSISTOR 2SC1623
Q139	8-729-100-66	s	TRANSISTOR 2SC1623
Q140	8-729-216-22	s	TRANSISTOR 2SA1162
Q141	8-729-100-66	s	TRANSISTOR 2SC1623
Q142	8-729-100-66	s	TRANSISTOR 2SC1623
Q144	8-729-216-22	s	TRANSISTOR 2SA1162
Q145	8-729-216-22	s	TRANSISTOR 2SA1162
Q146	8-729-216-22	s	TRANSISTOR 2SA1162
Q147	8-729-216-22	s	TRANSISTOR 2SA1162
Q148	8-729-101-25	s	TRANSISTOR 2SC1009A
Q149	8-729-216-22	s	TRANSISTOR 2SA1162
Q150	8-729-216-22	s	TRANSISTOR 2SA1162
Q151	8-729-100-66	s	TRANSISTOR 2SC1623
Q152	8-729-100-66	s	TRANSISTOR 2SC1623
Q153	8-729-101-25	s	TRANSISTOR 2SC1009A
Q154	8-729-216-22	s	TRANSISTOR 2SA1162
Q155	8-729-216-22	s	TRANSISTOR 2SA1162
Q156	8-729-100-66	s	TRANSISTOR 2SC1623
Q157	8-729-100-66	s	TRANSISTOR 2SC1623
Q158	8-729-101-25	s	TRANSISTOR 2SC1009A
Q159	8-729-216-22	s	TRANSISTOR 2SA1162
Q160	8-729-216-22	s	TRANSISTOR 2SA1162
Q161	8-729-100-66	s	TRANSISTOR 2SC1623
Q162	8-729-100-66	s	TRANSISTOR 2SC1623
Q163	8-729-100-66	s	TRANSISTOR 2SC1623
Q164	8-729-216-22	s	TRANSISTOR 2SA1162
Q165	8-729-200-87	s	TRANSISTOR 2SC2714Y
Q166	8-729-200-87	s	TRANSISTOR 2SC2714Y
Q167	8-729-200-87	s	TRANSISTOR 2SC2714Y
Q168	8-729-216-22	s	TRANSISTOR 2SA1162
Q169	8-729-216-22	s	TRANSISTOR 2SA1162
Q170	8-729-216-22	s	TRANSISTOR 2SA1162
R1	1-216-685-11	s	METAL CHIP 27K 0.50% 1/10W
R2	1-216-691-11	s	METAL CHIP 47K 0.50% 1/10W
R3	1-216-662-11	s	METAL CHIP 3K 0.50% 1/10W
R4	1-216-655-11	s	METAL CHIP 1.5K 0.50% 1/10W
R5	1-216-673-11	s	METAL CHIP 8.2K 0.50% 1/10W
R6	1-216-675-11	s	METAL CHIP 10K 0.50% 1/10W
R7	1-216-677-11	s	METAL CHIP 12K 0.50% 1/10W
R8	1-216-679-11	s	METAL CHIP 15K 0.50% 1/10W
R9	1-216-683-11	s	METAL CHIP 22K 0.50% 1/10W
R10	1-216-683-11	s	METAL CHIP 22K 0.50% 1/10W
R11	1-216-644-11	s	METAL CHIP 510 0.50% 1/10W
R13	1-216-665-11	s	METAL CHIP 3.9K 0.50% 1/10W
R14	1-216-660-11	s	METAL CHIP 2.4K 0.50% 1/10W
R15	1-216-682-11	s	METAL CHIP 20K 0.50% 1/10W
R16	1-216-671-11	s	METAL CHIP 6.8K 0.50% 1/10W
R17	1-216-660-11	s	METAL CHIP 2.4K 0.50% 1/10W
R18	1-216-670-11	s	METAL CHIP 6.2K 0.50% 1/10W
R19	1-216-645-11	s	METAL CHIP 560 0.50% 1/10W
R20	1-216-661-11	s	METAL CHIP 2.7K 0.50% 1/10W
R21	1-216-675-11	s	METAL CHIP 10K 0.50% 1/10W
R23	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R26	1-216-683-11	s	METAL CHIP 22K 0.50% 1/10W
R27	1-216-669-11	s	METAL CHIP 5.6K 0.50% 1/10W
R28	1-216-666-11	s	METAL CHIP 4.3K 0.50% 1/10W
R29	1-216-667-11	s	METAL CHIP 4.7K 0.50% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R30	1-216-667-11	s	METAL CHIP 4.7K 0.50% 1/10W
R44	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R45	1-216-668-11	s	METAL CHIP 5.1K 0.50% 1/10W
R46	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R47	1-216-665-11	s	METAL CHIP 3.9K 0.50% 1/10W
R48	1-216-659-11	s	METAL CHIP 2.2K 0.50% 1/10W
R49	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R50	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R51	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R52	1-216-675-11	s	METAL CHIP 10K 0.50% 1/10W
R53	1-216-672-11	s	METAL CHIP 7.5K 0.50% 1/10W
R54	1-216-675-11	s	METAL CHIP 10K 0.50% 1/10W
R55	1-216-648-11	s	METAL CHIP 750 0.50% 1/10W
R56	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
R57	1-216-668-11	s	METAL CHIP 5.1K 0.50% 1/10W
R58	1-216-668-11	s	METAL CHIP 5.1K 0.50% 1/10W
R59	1-216-660-11	s	METAL CHIP 2.4K 0.50% 1/10W
R60	1-216-665-11	s	METAL CHIP 3.9K 0.50% 1/10W
R64	1-216-674-11	s	METAL CHIP 9.1K 0.50% 1/10W
R66	1-216-683-11	s	METAL CHIP 22K 0.50% 1/10W
R70	1-216-663-11	s	METAL CHIP 3.3K 0.50% 1/10W
R71	1-216-655-11	s	METAL CHIP 1.5K 0.50% 1/10W
R72	1-216-676-11	s	METAL CHIP 11K 0.50% 1/10W
R73	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R74	1-216-603-11	s	METAL CHIP 10 0.50% 1/10W
R75	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R76	1-216-615-11	s	METAL CHIP 33 0.50% 1/10W
R77	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
R78	1-216-619-11	s	METAL CHIP 47 0.50% 1/10W
R79	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R80	1-216-644-11	s	METAL CHIP 510 0.50% 1/10W
R81	1-216-666-11	s	METAL CHIP 4.3K 0.50% 1/10W
R82	1-216-616-11	s	METAL CHIP 36 0.50% 1/10W
R83	1-216-661-11	s	METAL CHIP 2.7K 0.50% 1/10W
R84	1-216-665-11	s	METAL CHIP 3.9K 0.50% 1/10W
R85	1-216-661-11	s	METAL CHIP 2.7K 0.50% 1/10W
R86	1-216-665-11	s	METAL CHIP 3.9K 0.50% 1/10W
R87	1-216-644-11	s	METAL CHIP 510 0.50% 1/10W
R89	1-216-661-11	s	METAL CHIP 2.7K 0.50% 1/10W
R90	1-216-665-11	s	METAL CHIP 3.9K 0.50% 1/10W
R91	1-216-661-11	s	METAL CHIP 2.7K 0.50% 1/10W
R92	1-216-665-11	s	METAL CHIP 3.9K 0.50% 1/10W
R93	1-216-644-11	s	METAL CHIP 510 0.50% 1/10W
R95	1-216-665-11	s	METAL CHIP 3.9K 0.50% 1/10W
R96	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R97	1-216-675-11	s	METAL CHIP 10K 0.50% 1/10W
R98	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R99	1-216-642-11	s	METAL CHIP 430 0.50% 1/10W
R100	1-216-655-11	s	METAL CHIP 1.5K 0.50% 1/10W
R101	1-216-679-11	s	METAL CHIP 15K 0.50% 1/10W
R103	1-216-621-11	s	METAL CHIP 56 0.50% 1/10W
R104	1-216-621-11	s	METAL CHIP 56 0.50% 1/10W
R117	1-216-655-11	s	METAL CHIP 1.5K 0.50% 1/10W
R118	1-216-675-11	s	METAL CHIP 10K 0.50% 1/10W
R120	1-216-671-11	s	METAL CHIP 6.8K 0.50% 1/10W
R121	1-216-634-11	s	METAL CHIP 200 0.50% 1/10W
R124	1-216-683-11	s	METAL CHIP 22K 0.50% 1/10W
R125	1-216-683-11	s	METAL CHIP 22K 0.50% 1/10W
R140	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(PR-130 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R141	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R142	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R143	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R155	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R157	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R158	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R159	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R160	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R161	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R162	1-216-670-11	s METAL CHIP 6.2K 0.50% 1/10W
R163	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R164	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R165	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R167	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R170	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R171	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R172	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R173	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R174	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R188	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R189	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R190	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R191	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R192	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R193	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R194	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R195	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R196	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R197	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R198	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R199	1-216-648-11	s METAL CHIP 750 0.50% 1/10W
R200	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R201	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R202	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R203	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R204	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R208	1-216-674-11	s METAL CHIP 9.1K 0.50% 1/10W
R210	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R214	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R215	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R216	1-216-676-11	s METAL CHIP 11K 0.50% 1/10W
R217	1-216-633-11	s METAL CHIP 180 0.50% 1/10W
R218	1-216-603-11	s METAL CHIP 10 0.50% 1/10W
R219	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R220	1-216-615-11	s METAL CHIP 33 0.50% 1/10W
R221	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R222	1-216-619-11	s METAL CHIP 47 0.50% 1/10W
R223	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R224	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R225	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R226	1-216-616-11	s METAL CHIP 36 0.50% 1/10W
R227	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R228	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R229	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R230	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R231	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R233	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R234	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R235	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W

(PR-130 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R236	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R237	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R239	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R240	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R241	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R242	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R243	1-216-642-11	s METAL CHIP 430 0.50% 1/10W
R244	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R245	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R247	1-216-621-11	s METAL CHIP 56 0.50% 1/10W
R248	1-216-621-11	s METAL CHIP 56 0.50% 1/10W
R261	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R264	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R265	1-216-634-11	s METAL CHIP 200 0.50% 1/10W
R282	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R283	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R284	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R285	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R297	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R299	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R300	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R301	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R302	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R303	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R304	1-216-670-11	s METAL CHIP 6.2K 0.50% 1/10W
R305	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R306	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R307	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R309	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R312	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R313	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R314	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R315	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R316	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R330	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R331	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R332	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R333	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R334	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R335	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R336	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R337	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R338	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R339	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R341	1-216-648-11	s METAL CHIP 750 0.50% 1/10W
R342	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R343	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R344	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R345	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R346	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R350	1-216-674-11	s METAL CHIP 9.1K 0.50% 1/10W
R352	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R356	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R357	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R358	1-216-676-11	s METAL CHIP 11K 0.50% 1/10W
R359	1-216-633-11	s METAL CHIP 180 0.50% 1/10W
R360	1-216-603-11	s METAL CHIP 10 0.50% 1/10W
R361	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R362	1-216-615-11	s METAL CHIP 33 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(PR-130 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R363	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R364	1-216-619-11	s METAL CHIP 47 0.50% 1/10W
R365	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R366	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R367	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R368	1-216-616-11	s METAL CHIP 36 0.50% 1/10W
R369	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R370	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R371	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R372	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R373	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R375	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R376	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R377	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R378	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R379	1-216-644-11	s METAL CHIP 510 0.50% 1/10W
R381	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R382	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R384	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R385	1-216-642-11	s METAL CHIP 430 0.50% 1/10W
R386	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R387	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R389	1-216-621-11	s METAL CHIP 56 0.50% 1/10W
R390	1-216-621-11	s METAL CHIP 56 0.50% 1/10W
R403	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R404	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R406	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R407	1-216-634-11	s METAL CHIP 200 0.50% 1/10W
R424	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R425	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R426	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R427	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R444	1-216-682-11	s METAL CHIP 20K 0.50% 1/10W
R446	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R447	1-216-629-11	s METAL CHIP 120 0.50% 1/10W
R454	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R455	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R457	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R458	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R459	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R460	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R461	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R462	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R463	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R469	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R470	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R471	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R499	1-216-660-11	s METAL CHIP 2.4K 0.50% 1/10W
R520	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R528	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R536	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R550	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R551	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R568	1-216-634-11	s METAL CHIP 200 0.50% 1/10W
R569	1-216-634-11	s METAL CHIP 200 0.50% 1/10W
R570	1-216-634-11	s METAL CHIP 200 0.50% 1/10W
R571	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R572	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R573	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W

(PR-130 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R589	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R590	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
R591	1-216-643-11	s METAL CHIP 470 0.50% 1/10W
RB1	1-232-509-00	s COMPOSITION CIRCUIT BLOCK
RV1	1-228-456-00	s RES. ADJ. METAL 1K
RV2	1-228-475-00	s RES. ADJ. METAL 20K
RV3	1-228-475-00	s RES. ADJ. METAL 20K
RV5	1-228-475-00	s RES. ADJ. METAL 20K
RV7	1-228-454-00	s RES. ADJ. METAL 200
RV8	1-228-470-00	s RES. ADJ. METAL 500
RV9	1-228-472-00	s RES. ADJ. METAL 2K
RV10	1-228-475-00	s RES. ADJ. METAL 20K
RV11	1-228-460-00	s RES. ADJ. METAL 20K
RV13	1-228-475-00	s RES. ADJ. METAL 20K
RV15	1-228-454-00	s RES. ADJ. METAL 200
RV16	1-228-470-00	s RES. ADJ. METAL 500
RV17	1-228-472-00	s RES. ADJ. METAL 2K
RV18	1-228-475-00	s RES. ADJ. METAL 20K
RV19	1-228-475-00	s RES. ADJ. METAL 20K
RV21	1-228-475-00	s RES. ADJ. METAL 20K
RV23	1-228-454-00	s RES. ADJ. METAL 200
RV24	1-228-470-00	s RES. ADJ. METAL 500
RV25	1-228-472-00	s RES. ADJ. METAL 2K
RV26	1-228-454-00	s RES. ADJ. METAL 200
RV27	1-228-475-00	s RES. ADJ. METAL 20K
RV28	1-228-460-00	s RES. ADJ. METAL 20K
RV29	1-228-475-00	s RES. ADJ. METAL 20K
RV30	1-228-458-00	s RES. ADJ. METAL 5K
RV31	1-228-462-00	s RES. ADJ. METAL 100K
S1	1-570-610-11	s SWITCH, TOGGLE
TH1	1-807-361-11	s THERMISTOR, POSITIVE
TH2	1-807-361-11	s THERMISTOR, POSITIVE
TH3	1-807-361-11	s THERMISTOR, POSITIVE

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

PS-192 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-063-A	o MOUNTED CIRCUIT BOARD, PS-192
C1	1-136-210-00	s FILM 0.01uF 20% 250V
C2	1-136-210-00	s FILM 0.01uF 20% 250V
C3	1-161-742-00	s CERAMIC 0.0022uF 20% 400V
C4	1-161-742-00	s CERAMIC 0.0022uF 20% 400V
C5	1-125-601-11	s ELECT 470uF 20% 450VW
CN1	1-564-607-11	o CONNECTOR, 6P, MALE
D1	8-719-300-63	s DIODE LB156
L1	1-459-215-00	s COIL, 120uH
L2	1-459-215-00	s COIL, 120uH
T1	1-421-468-00	s LINE FILTER

PS-198 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-076-A	o MOUNTED CIRCUIT BOARD, PS-198
1pc	1-533-188-11	o HOLDER, FUSE
1pc	3-740-829-01	o SUPPORT, HEXAGON
1pc	3-740-839-01	o BRACKET, FUSE
2pcs	3-741-724-01	o HEAT SINK (TO-126)
1pc	7-628-254-10	s SCREW +PS 2.6X6
1pc	7-682-647-09	s SCREW +PS 3X6
4pcs	7-682-903-11	s SCREW +PWH 3X6
C1	1-136-187-11	s FILM 0.047uF 5% 250V
C2	1-127-465-00	s ELECT 10uF 20% 400V
C3	1-161-051-00	s CERAMIC 0.01uF 10% 25V
C4	1-124-248-00	s ELECT 22uF 20% 25V
C6	1-124-477-11	s ELECT 47uF 20% 25V
C8	1-124-477-11	s ELECT 47uF 20% 25V
C10	1-130-495-00	s MYLAR 0.1uF 5% 50V
C11	1-106-343-00	s MYLAR 0.001uF 5% 200V
C12	1-161-742-00	s CERAMIC 0.0022uF 20% 400V
C13	1-124-755-00	s ELECT 3300uF 20% 16V
C14	1-124-665-11	s ELECT 10uF 20% 200V
C15	1-123-872-00	s ELECT 22uF 20% 400V
C16	1-130-499-00	s MYLAR 0.22uF 5% 50V
C17	1-124-665-11	s ELECT 10uF 20% 200V
C18	1-161-045-00	s CERAMIC 0.0033uF 10% 50V
C19	1-126-104-11	s ELECT 470uF 20% 25V
C21	1-130-477-00	s MYLAR 0.0033uF 5% 50V
C22	1-130-483-00	s MYLAR 0.01uF 5% 50V
C24	1-124-477-11	s ELECT 47uF 20% 25V
C25	1-130-495-00	s MYLAR 0.1uF 5% 50V
C28	1-130-473-00	s MYLAR 0.0015uF 5% 50V
C29	1-136-203-11	s FILM 0.01uF 5% 630V
C31	1-124-755-00	s ELECT 3300uF 20% 16V
C32	1-130-499-00	s MYLAR 0.22uF 5% 50V
C33	1-124-755-00	s ELECT 3300uF 20% 16V
C34	1-130-499-00	s MYLAR 0.22uF 5% 50V
C35	1-124-755-00	s ELECT 3300uF 20% 16V
C36	1-130-499-00	s MYLAR 0.22uF 5% 50V
C39	1-126-104-11	s ELECT 470uF 20% 25V
C41	1-124-120-11	s ELECT 220uF 20% 25V
C42	1-124-120-11	s ELECT 220uF 20% 25V
C43	1-126-176-11	s ELECT 220uF 20% 10V
C44	1-124-242-00	s ELECT 33uF 20% 25V
C46	1-124-242-00	s ELECT 33uF 20% 25V
C47	1-124-242-00	s ELECT 33uF 20% 25V
C48	1-124-120-11	s ELECT 220uF 20% 25V
C49	1-124-360-00	s ELECT 1000uF 20% 16V
C50	1-124-261-00	s ELECT 10uF 20% 50V
C51	1-126-233-11	s ELECT 22uF 20% 35V
C53	1-124-755-00	s ELECT 3300uF 20% 16V
C54	1-130-499-00	s MYLAR 0.22uF 5% 50V
C55	1-124-755-00	s ELECT 3300uF 20% 16V
C56	1-130-499-00	s MYLAR 0.22uF 5% 50V
C59	1-162-666-11	s CERAMIC 0.022uF 10% 50V
C60	1-162-710-11	s CERAMIC 100PF 5% 50V
C61	1-162-734-11	s CERAMIC 0.001uF 1% 50V
C62	1-162-710-11	s CERAMIC 100PF 5% 50V
C64	1-106-351-00	s MYLAR 0.0022uF 5% 100V
C69	1-126-104-11	s ELECT 470uF 20% 25V
C70	1-126-104-11	s ELECT 470uF 20% 25V

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(PS-198 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C76	1-162-674-11	s CERAMIC 39PF 5% 50V
CN1	1-564-674-11	o CONNECTOR, 8P, MALE
CN2	1-564-915-11	o CONNECTOR, 7P, MALE
CN3	1-564-242-00	o CONNECTOR, 5P, MALE
CN4	1-564-243-00	o CONNECTOR, 6P, MALE
CN5	1-506-621-11	o CONNECTOR, 12P, MALE
CN6	1-506-618-11	o CONNECTOR, 6P, MALE
CN7	1-506-633-11	o CONNECTOR, 8P, MALE
CN8	1-506-626-11	o CONNECTOR, 22P, MALE
CN9	1-506-467-11	o CONNECTOR, 2P, MALE
D1	8-719-900-95	s DIODE V09G
D2	8-719-300-76	s DIODE RH-1A
D3	8-719-109-89	s DIODE RD5.6E-B2
D4	8-719-110-60	s DIODE RD24E-B2
D5	8-719-110-60	s DIODE RD24E-B2
D6	8-719-911-19	s DIODE 1SS119
D7	8-719-109-89	s DIODE RD5.6E-B2
D8	8-719-911-19	s DIODE 1SS119
D9	8-719-923-48	s DIODE 1S2348H
D10	8-719-000-20	s THYRISTOR BCR10CM-12L
D11	8-719-911-19	s DIODE 1SS119
D12	8-719-903-46	s DIODE ESAD85-009
D13	8-719-903-46	s DIODE ESAD85-009
D14	8-719-981-01	s DIODE ERA81-004
D15	8-719-981-01	s DIODE ERA81-004
D16	8-719-981-01	s DIODE ERA81-004
D17	8-719-981-01	s DIODE ERA81-004
D18	8-719-981-01	s DIODE ERA81-004
D19	8-719-910-65	s DIODE HZ6B2L
D20	8-719-911-19	s DIODE 1SS119
D21	8-719-110-60	s DIODE RD24E-B2
D22	8-719-815-85	s DIODE 1S1585
D23	8-719-110-41	s DIODE RD15ES-B2
D24	8-719-900-95	s DIODE V09G
D25	8-719-923-48	s DIODE 1S2348H
D26	8-719-911-19	s DIODE 1SS119
D27	8-719-981-01	s DIODE ERA81-004
D28	8-719-981-01	s DIODE ERA81-004
D29	8-719-981-01	s DIODE ERA81-004
D30	8-719-981-01	s DIODE ERA81-004
D31	8-719-981-00	s DIODE ERB81-004
D32	8-719-981-00	s DIODE ERB81-004
D33	8-719-981-01	s DIODE ERA81-004
D34	8-719-981-01	s DIODE ERA81-004
D35	8-719-911-19	s DIODE 1SS119
D36	8-719-911-19	s DIODE 1SS119
D37	8-719-102-53	s DIODE 1SZ53
D38	8-719-101-47	s DIODE RD4.7EL2
D39	8-719-981-00	s DIODE ERB81-004
D70	8-719-981-00	s DIODE ERB81-004
F1	A1-532-808-11	s FUSE, 2A 250V
IC1	8-759-982-10	s IC RC7809FA
IC2	8-759-904-94	s IC TL494CN
IC3	8-759-103-93	s IC UPC393C
IC4	8-759-937-35	s IC TL1451ACN
IC5	8-759-135-80	s IC UPL358C
L1	1-410-306-11	s COIL, CHOKE 130uH

(PS-198 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
L2	1-421-329-00	s COIL, CHOKE 10uH
L3	1-410-253-11	s COIL, CHOKE 80uH
L4	1-410-253-11	s COIL, CHOKE 80uH
L5	1-410-253-11	s COIL, CHOKE 80uH
L6	1-408-549-00	s INDUCTOR 150MH
L7	1-410-948-11	s INDUCTOR 100uH
L8	1-410-948-11	s INDUCTOR 100uH
L9	1-410-948-11	s INDUCTOR 100uH
L10	1-410-948-11	s INDUCTOR 100uH
L12	1-408-549-00	s INDUCTOR 150MH
L13	1-410-253-11	s COIL, CHOKE 80uH
L15	1-410-640-11	s COIL, OUTPUT CHOKE 130uH
L16	1-408-549-00	s INDUCTOR 150MH
L17	1-410-948-11	s INDUCTOR 100uH
L18	1-410-948-11	s INDUCTOR 100uH
L19	1-410-948-11	s INDUCTOR 100uH
Q1	8-729-811-11	s TRANSISTOR 2SD1111
Q2	8-729-105-97	s TRANSISTOR 2SA1156
Q3	8-729-105-97	s TRANSISTOR 2SA1156
Q4	8-729-255-12	s TRANSISTOR 2SC2551
Q5	8-729-906-53	s TRANSISTOR 2SC2542-15
Q6	8-729-906-53	s TRANSISTOR 2SC2542-15
Q7	8-729-140-96	s TRANSISTOR 2SD774-34
Q8	8-729-902-41	s TRANSISTOR 2SC3318
Q9	8-729-902-41	s TRANSISTOR 2SC3318
Q10	8-729-320-62	s TRANSISTOR 2SD789-03C
Q11	8-729-320-62	s TRANSISTOR 2SD789-03C
Q12	8-729-119-78	s TRANSISTOR 2SC2785-HF
Q13	8-729-119-78	s TRANSISTOR 2SC2785-HF
Q14	8-729-119-78	s TRANSISTOR 2SC2785-HF
Q15	8-729-119-78	s TRANSISTOR 2SC2785-HF
Q16	8-729-802-08	s TRANSISTOR 2SC3150
Q17	8-729-364-12	s TRANSISTOR 2SC641K
Q18	8-729-401-67	s TRANSISTOR 2SD1271-P
Q19	8-729-401-67	s TRANSISTOR 2SD1271-P
Q20	8-729-119-76	s TRANSISTOR 2SA1175-E
Q21	8-729-105-29	s TRANSISTOR 2SA1385
Q22	8-729-105-29	s TRANSISTOR 2SA1385
Q23	8-729-119-76	s TRANSISTOR 2SA1175-E
Q24	8-729-105-29	s TRANSISTOR 2SA1385
Q25	8-729-105-29	s TRANSISTOR 2SA1385
R1	1-247-895-00	s CARBON 470K 5% 1/4W
R2	1-247-903-00	s CARBON 1M 5% 1/4W
R4	1-214-926-21	s METAL 360K 1% 1/2W
R5	1-247-883-00	s CARBON 150K 5% 1/4W
R6	1-214-925-00	s METAL 330K 1% 1/2W
R14	1-247-729-11	s CARBON 15 5% 1/2W
R18	1-205-657-00	s WIREWOUND 150 5% 5W F
R19	1-247-893-11	s CARBON 390K 5% 1/4W
R20	1-247-893-11	s CARBON 390K 5% 1/4W
R23	1-214-557-00	s METAL 1K 1% 1/8W
R24	1-214-832-00	s METAL 47 1% 1/2W
R29	A1-205-627-00	s WIREWOUND 0.015 5% 5W F
R31	1-214-593-00	s METAL 33K 1% 1/8W
R32	1-214-586-00	s METAL 16K 1% 1/8W
R33	1-214-575-00	s METAL 5.6K 1% 1/8W
R34	1-247-883-00	s CARBON 150K 5% 1/4W
R35	1-214-574-00	s METAL 5.1K 1% 1/8W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(PS-198 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R38	1-214-590-00	s METAL 24K 1% 1/8W
R39	1-214-585-00	s METAL 15K 1% 1/8W
R40	1-214-573-00	s METAL 4.7K 1% 1/8W
R41	1-214-573-00	s METAL 4.7K 1% 1/8W
R43	1-214-581-00	s METAL 10K 1% 1/8W
R44	1-214-581-00	s METAL 10K 1% 1/8W
R45	1-214-551-00	s METAL 560 1% 1/8W
R46	1-214-557-00	s METAL 1K 1% 1/8W
R47	1-214-925-00	s METAL 330K 1% 1/2W
R49	1-247-899-11	s CARBON 680K 5% 1/4W
R50	1-214-913-00	s METAL 100K 1% 1/2W
R55	1-247-838-00	s CARBON 2K 5% 1/4W
R56	1-247-838-00	s CARBON 2K 5% 1/4W
R58	1-247-838-00	s CARBON 2K 5% 1/4W
R68	1-215-820-11	s METAL 39K 1% 1/8W
R69	1-214-581-00	s METAL 10K 1% 1/8W
R73	1-214-587-00	s METAL 18K 1% 1/8W
R75	1-214-584-00	s METAL 13K 1% 1/8W
R76	1-214-591-00	s METAL 27K 1% 1/8W
R77	1-215-826-11	s METAL 68K 1% 1/8W
R78	1-215-822-11	s METAL 47K 1% 1/8W
R79	1-215-826-11	s METAL 68K 1% 1/8W
R85	1-214-593-00	s METAL 33K 1% 1/8W
R86	1-214-573-00	s METAL 4.7K 1% 1/8W
R90	1-214-586-00	s METAL 16K 1% 1/8W
R91	1-214-572-00	s METAL 4.3K 1% 1/8W
R94	1-214-585-00	s METAL 15K 1% 1/8W
R95	1-214-572-00	s METAL 4.3K 1% 1/8W
R99	1-247-838-00	s CARBON 2K 5% 1/4W
RV1	1-228-456-00	s RES. ADJ. METAL 1K
RV2	1-228-456-00	s RES. ADJ. METAL 1K
RV3	1-228-456-00	s RES. ADJ. METAL 1K
RY1	1-515-626-11	s RELAY
T1	1-448-074-22	s TRANSFORMER, CONVERTER
T2	1-447-106-00	s TRANSFORMER, DRIVE
T3	1-446-912-00	s TRANSFORMER, CONVERTER (SUB)
T4	1-449-910-11	s TRANSFORMER, DC-DC CONVERTER

SG-167P BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-070-A	o MOUNTED CIRCUIT BOARD, SG-167P
1pc	2-251-622-00	o LEVER, PC BOARD
1pc	7-626-317-11	s PIN, SPRING 2.5X6
2pcs	7-628-254-40	s SCREW +PS 2.6X12
4pcs	7-682-902-01	s SCREW +PWH 2.6X4
C38	1-130-473-00	s MYLAR 0.0015uF 5% 50V
C39	1-130-475-00	s MYLAR 0.0022uF 5% 50V
C58	1-163-086-00	s CERAMIC CHIP 3PF 0.25PF 50V
CN1	1-562-730-11	o CONNECTOR, MULTI 90P, MALE
CP1	1-577-182-11	s OSCILLATOR, CRYSTAL 28.375MHz
D2	8-719-800-76	s DIODE 1SS226
D3	8-719-800-76	s DIODE 1SS226
D4	8-719-104-34	s DIODE 1S2836
D5	8-719-921-12	s DIODE HZ2BL1
D6	8-719-118-38	s DIODE 1SZ46A
D7	8-719-101-64	s DIODE RD6.8EL2
D8	8-719-101-64	s DIODE RD6.8EL2
FB1	1-535-178-00	s RES. FERRITE
FB2	1-535-178-00	s RES. FERRITE
FB3	1-535-178-00	s RES. FERRITE
FL1	1-235-574-12	s LOW PASS 1MHz
IC1	8-759-906-54	s IC TL064CNS
IC5	8-757-930-11	s IC CX7930A
IC6	8-759-907-21	s IC CX7969
IC7	8-759-009-51	s IC MC14538BF
IC8	8-759-008-84	s IC MC14015BF
IC9	8-759-008-84	s IC MC14015BF
IC10	8-759-008-79	s IC TC4011BF
IC11	8-759-008-74	s IC MC14001BF
IC12	8-759-009-12	s IC MC14071BF
IC13	8-759-200-79	s IC TC4049BF
IC14	8-759-009-04	s IC MC14050BF
IC15	8-759-008-79	s IC TC4011BF
IC16	8-759-200-79	s IC TC4049BF
IC17	8-759-009-37	s IC MC14512BF
IC18	8-759-147-84	s IC CXD8072Q
IC19	8-759-200-79	s IC TC4049BF
IC20	8-759-925-90	s IC SN74HC74NS
Q1	8-729-105-29	s TRANSISTOR 2SA1385
Q2	8-729-105-29	s TRANSISTOR 2SA1385
Q3	8-729-105-19	s TRANSISTOR 2SC3518
Q4	8-729-216-22	s TRANSISTOR 2SA1162
Q5	8-729-216-22	s TRANSISTOR 2SA1162
Q6	8-729-216-22	s TRANSISTOR 2SA1162
Q7	8-729-100-66	s TRANSISTOR 2SC1623
Q8	8-729-200-87	s TRANSISTOR 2SC2714Y
Q9	8-729-100-66	s TRANSISTOR 2SC1623
Q10	8-729-200-87	s TRANSISTOR 2SC2714Y
Q11	8-729-216-22	s TRANSISTOR 2SA1162
Q12	8-729-216-22	s TRANSISTOR 2SA1162
Q13	8-729-200-87	s TRANSISTOR 2SC2714Y
Q14	8-729-100-66	s TRANSISTOR 2SC1623
Q15	8-729-200-87	s TRANSISTOR 2SC2714Y
Q16	8-729-216-22	s TRANSISTOR 2SA1162
Q17	8-729-216-22	s TRANSISTOR 2SA1162

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(SG-167P BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q19	8-729-101-25	s TRANSISTOR 2SC1009A
Q21	8-729-100-66	s TRANSISTOR 2SC1623
Q22	8-729-100-66	s TRANSISTOR 2SC1623
Q23	8-729-101-25	s TRANSISTOR 2SC1009A
R1	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R2	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R3	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R4	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R5	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R6	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R7	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R8	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R9	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R10	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R28	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R29	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R30	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R31	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R32	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R33	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R35	1-216-654-11	s METAL CHIP 1.3K 0.50% 1/10W
R36	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R37	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R38	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R41	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R42	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R43	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R44	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R45	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R46	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R48	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R49	1-216-654-11	s METAL CHIP 1.3K 0.50% 1/10W
R50	1-216-668-11	s METAL CHIP 5.1K 0.50% 1/10W
R51	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R86	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R87	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R96	1-216-692-11	s METAL CHIP 51K 0.50% 1/10W
R104	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R115	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R135	1-216-623-11	s METAL CHIP 68 0.50% 1/10W
R136	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R137	1-216-623-11	s METAL CHIP 68 0.50% 1/10W
R138	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
RB1	1-239-024-11	s MATRIX
RB2	1-239-025-11	s MATRIX
RB3	1-239-026-11	s MATRIX
RV1	1-228-456-00	s RES. ADJ. METAL 1K
S1	1-570-857-11	s SWITCH, SLIDE
S2	1-570-857-11	s SWITCH, SLIDE

SW-386 BOARD

Ref. No. or Q'ty	Part No.	SP Description
	1-632-987-11	o PRINTED CIRCUIT BOARD, SW-386
CN1	1-506-484-11	o CONNECTOR, 5P MALE

SW-387 BOARD

Ref. No. or Q'ty	Part No.	SP Description
	1-632-988-11	o PRINTED CIRCUIT BOARD, SW-387
CN1	1-506-482-11	o CONNECTOR, 3P MALE

SW-388 BOARD

Ref. No. or Q'ty	Part No.	SP Description
	1-632-989-11	o PRINTED CIRCUIT BOARD, SW-388
C1	1-131-377-00	s TANTALUM 10uF 10% 10V
CN1	1-506-628-11	o CONNECTOR, 26P. MALE
CN2	1-506-487-11	o CONNECTOR, 8P. MALE
CN3	1-506-483-21	o CONNECTOR, 4P. MALE
CN4	1-506-481-11	o CONNECTOR, 2P. MALE
L1	1-408-417-21	s INDUCTOR (LF-8S)
R1	1-249-419-11	s CARBON 1.5K 5% 1/4W
R2	1-249-422-11	s CARBON 2.7K 5% 1/4W
R3	1-249-422-11	s CARBON 2.7K 5% 1/4W
R4	1-249-422-11	s CARBON 2.7K 5% 1/4W
R5	1-249-419-11	s CARBON 1.5K 5% 1/4W
R6	1-249-419-11	s CARBON 1.5K 5% 1/4W
R7	1-249-422-11	s CARBON 2.7K 5% 1/4W
R8	1-249-422-11	s CARBON 2.7K 5% 1/4W
R9	1-249-422-11	s CARBON 2.7K 5% 1/4W
R10	1-249-419-11	s CARBON 1.5K 5% 1/4W
R11	1-249-411-11	s CARBON 330 5% 1/4W
RV1	1-224-981-00	s RES. VAR. METAL 5K "H-POS1"
RV2	1-224-981-00	s RES. VAR. METAL 5K "WIDTH"
RV3	1-224-981-00	s RES. VAR. METAL 5K "V-POS1"
RV4	1-224-981-00	s RES. VAR. METAL 5K "HEIGHT"
S1	1-554-355-00	s SWITCH. TOGGLE "CENTER MARKER"
S2	1-554-355-00	s SWITCH. TOGGLE "SAFETY ZONE"
S3	1-554-355-00	s SWITCH. TOGGLE "MIX VF"
S4	1-554-355-00	s SWITCH. TOGGLE "MIX VF"
S5	1-554-355-00	s SWITCH. TOGGLE "UP TALLY"
S6	1-554-770-11	s SWITCH. TOGGLE "DISPLAY"
S7	1-572-197-11	s SWITCH. PUSH(1 KEY) "CALL"
S8	1-572-196-11	s SWITCH. ROTARY "CC"
S9	1-572-196-11	s SWITCH. ROTARY "ND"

SW-389 BOARD

Ref. No. or Q'ty	Part No.	SP Description
	1-633-014-11	o PRINTED CIRCUIT BOARD, SW-389
CN1	1-506-630-11	o CONNECTOR, 30P. MALE
CN2	1-506-486-11	o CONNECTOR, 7P. MALE
CN3	1-506-486-11	o CONNECTOR, 7P. MALE
CN4	1-506-484-11	o CONNECTOR, 5P. MALE
RV1	1-238-214-21	s RES. VAR. CARBON 10K "PGM2"
RV2	1-238-214-21	s RES. VAR. CARBON 10K "INCOM2"
RV3	1-238-214-21	s RES. VAR. CARBON 10K "PGM1"
RV4	1-238-214-21	s RES. VAR. CARBON 10K "INCOM1"

SW-417 BOARD

Ref. No. or Q'ty	Part No.	SP Description
	1-632-990-11	o PRINTED CIRCUIT BOARD, SW-417
CN1	1-506-483-21	o CONNECTOR, 4P. MALE

VA-86 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-064-B	o MOUNTED CIRCUIT BOARD, VA-86
1pc	2-251-622-00	o LEVER, PC BOARD
18pcs	3-621-124-00	o SPACER
1pc	7-626-317-11	s PIN, SPRING 2.5X6
2pcs	7-628-254-40	s SCREW +PS 2.6X12
4pcs	7-682-902-01	s SCREW +PWH 2.6X4
C21	1-163-099-00	s CERAMIC CHIP 18PF 5% 50V
C25	1-124-292-00	s ELECT 33uF 20% 6.3V
C31	1-163-227-11	s CERAMIC CHIP 10PF 5% 50V
C38	1-163-227-11	s CERAMIC CHIP 10PF 5% 50V
C39	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C58	1-124-292-00	s ELECT 33uF 20% 6.3V
C65	1-163-099-00	s CERAMIC CHIP 18PF 5% 50V
C79	1-163-227-11	s CERAMIC CHIP 10PF 5% 50V
C80	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C106	1-163-099-00	s CERAMIC CHIP 18PF 5% 50V
C109	1-124-292-00	s ELECT 33uF 20% 6.3V
C115	1-163-227-11	s CERAMIC CHIP 10PF 5% 50V
C122	1-163-227-11	s CERAMIC CHIP 10PF 5% 50V
C123	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C145	1-164-309-91	s CERAMIC 0.001uF 1% 50V
C150	1-130-471-00	s MYLAR 0.001uF 5% 50V
C152	1-163-263-11	s CERAMIC CHIP 330PF 5% 50V
C165	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C166	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C167	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C168	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C169	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C170	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C171	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C172	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C173	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C174	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C175	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C176	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C177	1-163-037-11	s CERAMIC CHIP 0.022uF 10% 25V
C179	1-163-037-11	s CERAMIC CHIP 0.022uF 10% 25V
C180	1-163-037-11	s CERAMIC CHIP 0.022uF 10% 25V
C182	1-163-227-11	s CERAMIC CHIP 10PF 5% 50V
C183	1-130-495-00	s MYLAR 0.1uF 5% 50V
C184	1-130-491-00	s MYLAR 0.047uF 5% 50V
C186	1-130-483-00	s MYLAR 0.01uF 5% 50V
C201	1-163-251-11	s CERAMIC 100PF 5% 50V
C202	1-163-251-11	s CERAMIC 100PF 5% 50V
C203	1-163-251-11	s CERAMIC 100PF 5% 50V
C214	1-135-164-21	s TANTALUM CHIP 22uF 10% 20V
C215	1-135-164-21	s TANTALUM CHIP 22uF 10% 20V
C216	1-135-164-21	s TANTALUM CHIP 22uF 10% 20V
C217	1-135-161-21	s TANTALUM CHIP 22uF 10% 10V
C218	1-135-161-21	s TANTALUM CHIP 22uF 10% 10V
C219	1-135-161-21	s TANTALUM CHIP 22uF 10% 10V
C223	1-102-942-00	s CERAMIC 5PF 1PF 50V
C224	1-102-942-00	s CERAMIC 5PF 1PF 50V
C225	1-102-961-00	s CERAMIC 27PF 5% 50V
C226	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C227	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C228	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C229	1-124-287-00	s ELECT 10uF 20% 10V

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Ref. No. or Q'ty	Part No.	SP Description
C240	1-124-287-00	s ELECT(NON POLAR)10MF 20% 10V
C241	1-124-287-00	s ELECT(NON POLAR)10MF 20% 10V
C242	1-124-287-00	s ELECT(NON POLAR)10MF 20% 10V
C243	1-163-038-00	s CERAMIC CHIP 0.1MF 25V
C244	1-163-038-00	s CERAMIC CHIP 0.1MF 25V
C245	1-163-038-00	s CERAMIC CHIP 0.1MF 25V
CN1	1-562-730-11	o CONNECTOR, MULTI 90P. MALE
D1	8-719-921-12	s DIODE HZ2BLL
D2	8-719-101-64	s DIODE RD6.8EL2
D3	8-719-118-38	s DIODE 1S246A
D4	8-719-101-64	s DIODE RD6.8EL2
D6	8-719-104-31	s DIODE 1S2838
D7	8-719-104-34	s DIODE 1S2836
D8	8-719-104-34	s DIODE 1S2836
D10	8-719-104-31	s DIODE 1S2838
D11	8-719-104-31	s DIODE 1S2838
D13	8-719-104-34	s DIODE 1S2836
D15	8-719-104-31	s DIODE 1S2838
D16	8-719-800-76	s DIODE 1SS226
D17	8-719-800-76	s DIODE 1SS226
D18	8-719-800-76	s DIODE 1SS226
D19	8-719-400-18	s DIODE MA152WK
FL1	1-239-038-11	s FILTER, TRAP 14.3MHz
FL2	1-239-038-11	s FILTER, TRAP 14.3MHz
FL3	1-239-038-11	s FILTER, TRAP 14.3MHz
IC1	8-759-906-54	s IC TL064CNS
IC2	8-741-108-20	s IC BX1082
IC3	1-807-422-11	s IC BH-1217
IC4	8-759-981-51	s IC RC1496M
IC5	8-741-108-20	s IC BX1082
IC6	8-759-981-51	s IC RC1496M
IC7	8-759-009-07	s IC MC14053BF
IC8	8-759-100-97	s IC UPC339G2
IC9	8-741-108-20	s IC BX1082
IC10	8-759-030-16	s IC MC34182M
IC11	1-807-422-11	s IC BH-1217
IC12	8-759-981-51	s IC RC1496M
IC13	8-741-108-20	s IC BX1082
IC14	8-759-981-51	s IC RC1496M
IC15	8-741-108-20	s IC BX1082
IC16	1-807-422-11	s IC BH-1217
IC17	8-759-981-51	s IC RC1496M
IC18	8-741-108-20	s IC BX1082
IC19	8-759-981-51	s IC RC1496M
IC20	8-759-008-74	s IC MC14001BF
IC21	8-759-009-07	s IC MC14053BF
IC22	8-759-009-04	s IC MC14050BF
IC23	8-759-009-04	s IC MC14050BF
IC24	8-759-209-57	s IC TC4S69F
IC25	8-759-906-54	s IC TL064CNS
IC26	8-759-013-96	s IC MC74HC4316F
IC27	8-759-906-54	s IC TL064CNS
IC28	8-759-906-54	s IC TL064CNS
IC32	8-759-147-84	s IC CXD8072Q
IC33	8-759-204-90	s IC TC40H374F
IC34	8-759-209-97	s IC TC4S81F
IC35	8-759-008-74	s IC MC14001BF

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(VA-86 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC36	8-759-994-64	s IC MB88341PF
IC37	8-759-979-73	s IC TLC2714CNS
IC38	8-759-009-07	s IC MC14053BF
IC39	8-759-009-07	s IC MC14053BF
IC40	8-759-979-73	s IC TLC2714CNS
IC41	8-759-906-54	s IC TL064CNS
IC42	8-759-979-73	s IC TLC2714CNS
IC43	8-759-979-73	s IC TLC2714CNS
IC44	8-759-009-07	s IC MC14053BF
IC45	8-759-906-54	s IC TL064CNS
IC46	8-759-030-16	s IC MC34182M
IC47	8-759-030-16	s IC MC34182M
IC48	8-759-209-90	s IC TC4S71F
Q1	8-729-105-29	s TRANSISTOR 2SA1385
Q2	8-729-105-19	s TRANSISTOR 2SC3518
Q3	8-729-105-29	s TRANSISTOR 2SA1385
Q4	8-729-200-87	s TRANSISTOR 2SC2714Y
Q5	8-729-200-87	s TRANSISTOR 2SC2714Y
Q6	8-729-122-63	s TRANSISTOR 2SA1226
Q7	8-729-200-87	s TRANSISTOR 2SC2714Y
Q8	8-729-109-44	s TRANSISTOR 2SK94
Q9	8-729-109-44	s TRANSISTOR 2SK94
Q10	8-729-109-44	s TRANSISTOR 2SK94
Q11	8-729-109-44	s TRANSISTOR 2SK94
Q12	8-729-200-87	s TRANSISTOR 2SC2714Y
Q13	8-729-216-22	s TRANSISTOR 2SA1162
Q14	8-729-216-22	s TRANSISTOR 2SA1162
Q15	8-729-216-22	s TRANSISTOR 2SA1162
Q16	8-729-116-06	s TRANSISTOR 2SK160-K6
Q17	8-729-116-06	s TRANSISTOR 2SK160-K6
Q18	8-729-109-44	s TRANSISTOR 2SK94
Q19	8-729-109-44	s TRANSISTOR 2SK94
Q20	8-729-421-71	s TRANSISTOR 2SK620
Q21	8-729-200-87	s TRANSISTOR 2SC2714Y
Q22	8-729-200-87	s TRANSISTOR 2SC2714Y
Q23	8-729-122-63	s TRANSISTOR 2SA1226
Q24	8-729-200-87	s TRANSISTOR 2SC2714Y
Q25	8-729-200-87	s TRANSISTOR 2SC2714Y
Q28	8-729-216-22	s TRANSISTOR 2SA1162
Q29	8-729-216-22	s TRANSISTOR 2SA1162
Q30	8-729-100-66	s TRANSISTOR 2SC1623
Q31	8-729-100-66	s TRANSISTOR 2SC1623
Q32	8-729-421-71	s TRANSISTOR 2SK620
Q33	8-729-100-66	s TRANSISTOR 2SC1623
Q34	8-729-216-22	s TRANSISTOR 2SA1162
Q35	8-729-216-22	s TRANSISTOR 2SA1162
Q39	8-729-200-87	s TRANSISTOR 2SC2714Y
Q40	8-729-200-87	s TRANSISTOR 2SC2714Y
Q41	8-729-200-87	s TRANSISTOR 2SC2714Y
Q42	8-729-122-63	s TRANSISTOR 2SA1226
Q43	8-729-200-87	s TRANSISTOR 2SC2714Y
Q44	8-729-109-44	s TRANSISTOR 2SK94
Q45	8-729-109-44	s TRANSISTOR 2SK94
Q46	8-729-109-44	s TRANSISTOR 2SK94
Q47	8-729-109-44	s TRANSISTOR 2SK94
Q48	8-729-200-87	s TRANSISTOR 2SC2714Y
Q49	8-729-216-22	s TRANSISTOR 2SA1162
Q50	8-729-216-22	s TRANSISTOR 2SA1162

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Ref. No. or Q'ty	Part No.	SP Description
Q51	8-729-216-22	s TRANSISTOR 2SA1162
Q52	8-729-116-06	s TRANSISTOR 2SK160-K6
Q53	8-729-116-06	s TRANSISTOR 2SK160-K6
Q54	8-729-109-44	s TRANSISTOR 2SK94
Q55	8-729-109-44	s TRANSISTOR 2SK94
Q56	8-729-421-71	s TRANSISTOR 2SK620
Q57	8-729-200-87	s TRANSISTOR 2SC2714Y
Q58	8-729-200-87	s TRANSISTOR 2SC2714Y
Q59	8-729-122-63	s TRANSISTOR 2SA1226
Q60	8-729-100-66	s TRANSISTOR 2SC1623
Q61	8-729-100-66	s TRANSISTOR 2SC1623
Q63	8-729-216-22	s TRANSISTOR 2SA1162
Q64	8-729-216-22	s TRANSISTOR 2SA1162
Q65	8-729-100-66	s TRANSISTOR 2SC1623
Q66	8-729-100-66	s TRANSISTOR 2SC1623
Q67	8-729-421-71	s TRANSISTOR 2SK620
Q68	8-729-100-66	s TRANSISTOR 2SC1623
Q69	8-729-216-22	s TRANSISTOR 2SA1162
Q70	8-729-216-22	s TRANSISTOR 2SA1162
Q71	8-729-200-87	s TRANSISTOR 2SC2714Y
Q72	8-729-200-87	s TRANSISTOR 2SC2714Y
Q73	8-729-122-63	s TRANSISTOR 2SA1226
Q74	8-729-200-87	s TRANSISTOR 2SC2714Y
Q75	8-729-109-44	s TRANSISTOR 2SK94
Q76	8-729-109-44	s TRANSISTOR 2SK94
Q77	8-729-109-44	s TRANSISTOR 2SK94
Q78	8-729-109-44	s TRANSISTOR 2SK94
Q79	8-729-200-87	s TRANSISTOR 2SC2714Y
Q80	8-729-216-22	s TRANSISTOR 2SA1162
Q81	8-729-216-22	s TRANSISTOR 2SA1162
Q82	8-729-216-22	s TRANSISTOR 2SA1162
Q83	8-729-116-06	s TRANSISTOR 2SK160-K6
Q84	8-729-116-06	s TRANSISTOR 2SK160-K6
Q85	8-729-109-44	s TRANSISTOR 2SK94
Q86	8-729-109-44	s TRANSISTOR 2SK94
Q87	8-729-421-71	s TRANSISTOR 2SK620
Q88	8-729-200-87	s TRANSISTOR 2SC2714Y
Q89	8-729-200-87	s TRANSISTOR 2SC2714Y
Q90	8-729-122-63	s TRANSISTOR 2SA1226
Q91	8-729-100-66	s TRANSISTOR 2SC1623
Q93	8-729-216-22	s TRANSISTOR 2SA1162
Q94	8-729-216-22	s TRANSISTOR 2SA1162
Q95	8-729-100-66	s TRANSISTOR 2SC1623
Q96	8-729-100-66	s TRANSISTOR 2SC1623
Q97	8-729-421-71	s TRANSISTOR 2SK620
Q98	8-729-216-22	s TRANSISTOR 2SA1162
Q99	8-729-100-66	s TRANSISTOR 2SC1623
Q100	8-729-216-22	s TRANSISTOR 2SA1162
Q101	8-729-100-66	s TRANSISTOR 2SC1623
Q102	8-729-216-22	s TRANSISTOR 2SA1162
Q103	8-729-100-66	s TRANSISTOR 2SC1623
Q104	8-729-216-22	s TRANSISTOR 2SA1162
Q105	8-729-216-22	s TRANSISTOR 2SA1162
Q107	8-729-100-66	s TRANSISTOR 2SC1623
Q108	8-729-901-06	s TRANSISTOR DTA144EK-46
Q109	8-729-901-06	s TRANSISTOR DTA144EK-46
Q110	8-729-901-06	s TRANSISTOR DTA144EK-46
Q111	8-729-901-06	s TRANSISTOR DTA144EK-46
Q112	8-729-100-66	s TRANSISTOR 2SC1623

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

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Ref. No. or Q'ty	Part No.	SP Description
Q113	8-729-421-71	s TRANSISTOR 2SK620
Q114	8-729-100-66	s TRANSISTOR 2SC1623
Q115	8-729-421-71	s TRANSISTOR 2SK620
Q116	8-729-100-66	s TRANSISTOR 2SC1623
Q117	8-729-421-71	s TRANSISTOR 2SK620
Q118	8-729-216-22	s TRANSISTOR 2SA1162
Q119	8-729-100-66	s TRANSISTOR 2SC1623
Q120	8-729-100-66	s TRANSISTOR 2SC1623
Q121	8-729-100-66	s TRANSISTOR 2SC1623
Q140	8-729-100-66	s TRANSISTOR 2SC1623
Q141	8-729-100-66	s TRANSISTOR 2SC1623
Q142	8-729-100-66	s TRANSISTOR 2SC1623
Q143	8-729-100-66	s TRANSISTOR 2SC1623
Q144	8-729-100-66	s TRANSISTOR 2SC1623
R1	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R2	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R3	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R4	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R5	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R6	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R7	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R8	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R9	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R10	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R11	1-216-649-11	s METAL CHIP 820 0.50% 1/10W
R12	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R13	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R15	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R16	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R17	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R18	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R19	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R20	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R21	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R22	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R23	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R24	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R25	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R26	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R27	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R28	1-216-656-11	s METAL CHIP 1.6K 0.50% 1/10W
R31	1-216-648-11	s METAL CHIP 750 0.50% 1/10W
R34	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R35	1-216-674-11	s METAL CHIP 9.1K 0.50% 1/10W
R37	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R38	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R39	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R40	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R41	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R42	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R43	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R44	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R45	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R47	1-216-621-11	s METAL CHIP 56 0.50% 1/10W
R48	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R49	1-216-650-11	s METAL CHIP 910 0.50% 1/10W
R53	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R54	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R55	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W

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Ref. No. or Q'ty	Part No.	SP Description
R57	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R61	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R62	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R63	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R64	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R65	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R70	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R71	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R74	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R75	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R76	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R77	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R78	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R79	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R80	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R81	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R82	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R83	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R84	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R85	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R86	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R87	1-216-686-11	s METAL CHIP 30K 0.50% 1/10W
R88	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R90	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R91	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R92	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R93	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R94	1-216-688-11	s METAL CHIP 36K 0.50% 1/10W
R95	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R96	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R97	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R98	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R101	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R102	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R103	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R104	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R105	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R106	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R107	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R108	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R109	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R110	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R111	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R113	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R114	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R116	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R117	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R118	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R119	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R120	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R121	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R122	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R125	1-216-619-11	s METAL CHIP 47 0.50% 1/10W
R128	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R131	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R132	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R140	1-216-649-11	s METAL CHIP 820 0.50% 1/10W
R141	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R142	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

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Ref. No. or Q'ty	Part No.	SP Description
R143	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R145	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R146	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R147	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R148	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R149	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R150	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R151	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R152	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R153	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R154	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R155	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R156	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R157	1-216-678-11	s METAL CHIP 13K 0.50% 1/10W
R158	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R160	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R161	1-216-648-11	s METAL CHIP 750 0.50% 1/10W
R165	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R166	1-216-674-11	s METAL CHIP 9.1K 0.50% 1/10W
R169	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R170	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R171	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R172	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R173	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R174	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R175	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R176	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R177	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R179	1-216-621-11	s METAL CHIP 56 0.50% 1/10W
R180	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R181	1-216-650-11	s METAL CHIP 910 0.50% 1/10W
R185	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R187	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R189	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R190	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R193	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R194	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R196	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R197	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R200	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R203	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R204	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R207	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R208	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R209	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R210	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R211	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R212	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R213	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R214	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R215	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R216	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R217	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R218	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R219	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R220	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R221	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R222	1-216-686-11	s METAL CHIP 30K 0.50% 1/10W
R223	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W

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Ref. No. or Q'ty	Part No.	SP Description
R224	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R226	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R227	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R228	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R229	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R230	1-216-688-11	s METAL CHIP 36K 0.50% 1/10W
R231	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R232	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R233	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R234	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R237	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R238	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R240	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R241	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R242	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R243	1-216-656-11	s METAL CHIP 1.6K 0.50% 1/10W
R245	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R246	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R247	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R248	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R249	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R250	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R252	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R253	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R254	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R256	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R257	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R258	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R259	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R260	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R261	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R262	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R263	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R264	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R265	1-216-649-11	s METAL CHIP 820 0.50% 1/10W
R266	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R267	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R268	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R269	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R271	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R272	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R273	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R274	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R275	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R276	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R277	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R278	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R279	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R280	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R281	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R282	1-216-648-11	s METAL CHIP 750 0.50% 1/10W
R285	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R288	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R289	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R290	1-216-674-11	s METAL CHIP 9.1K 0.50% 1/10W
R293	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R294	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R295	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R296	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

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Ref. No. or Q'ty	Part No.	SP Description
R297	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R298	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R299	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R300	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R302	1-216-621-11	s METAL CHIP 56 0.50% 1/10W
R303	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R304	1-216-650-11	s METAL CHIP 910 0.50% 1/10W
R308	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R310	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R312	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R313	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R316	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R317	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R319	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R320	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R323	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R326	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R327	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R330	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R331	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R332	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R333	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R334	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R335	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R336	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R337	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R338	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R339	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R340	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R341	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R342	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R343	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R344	1-216-686-11	s METAL CHIP 30K 0.50% 1/10W
R346	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R347	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R348	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R349	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R350	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R351	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R352	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R353	1-216-688-11	s METAL CHIP 36K 0.50% 1/10W
R354	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R355	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R356	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R359	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R360	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R361	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R362	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R363	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R364	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R365	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R366	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R367	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R368	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R369	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R370	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R371	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R373	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R375	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W

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Ref. No. or Q'ty	Part No.	SP Description
R376	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R377	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R378	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R380	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R381	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R384	1-216-656-11	s METAL CHIP 1.6K 0.50% 1/10W
R388	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R389	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R390	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R394	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R395	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R402	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R403	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R426	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R428	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R429	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R430	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R431	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R438	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R439	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R441	1-216-619-11	s METAL CHIP 47 0.50% 1/10W
R458	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R459	1-216-619-11	s METAL CHIP 47 0.50% 1/10W
R462	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R463	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R465	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R467	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R469	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R471	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R473	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R491	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R492	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R493	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R494	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R495	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R496	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R507	1-216-678-11	s METAL CHIP 13K 0.50% 1/10W
R509	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R510	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R511	1-216-696-11	s METAL CHIP 75K 0.50% 1/10W
R512	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R513	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R514	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R515	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R516	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R517	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R540	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R541	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R543	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R544	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R546	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R547	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R550	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R553	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R554	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R556	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R557	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R567	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R568	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

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Ref. No. or Q'ty	Part No.	SP Description
R569	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R587	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R588	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R589	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R590	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R591	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R592	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R599	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R600	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R601	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R615	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R616	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R617	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R634	1-216-611-11	s METAL CHIP 22 0.50% 1/10W
R635	1-216-611-11	s METAL CHIP 22 0.50% 1/10W
R636	1-216-611-11	s METAL CHIP 22 0.50% 1/10W
RV1	1-228-456-00	s RES. ADJ. METAL 1K
RV2	1-228-472-00	s RES. ADJ. METAL 2K
RV4	1-228-462-00	s RES. ADJ. METAL 100K
RV5	1-228-462-00	s RES. ADJ. METAL 100K
RV6	1-228-474-00	s RES. ADJ. METAL 10K
RV7	1-228-457-00	s RES. ADJ. METAL 2K
RV8	1-228-462-00	s RES. ADJ. METAL 100K
RV9	1-228-462-00	s RES. ADJ. METAL 100K
RV10	1-228-474-00	s RES. ADJ. METAL 10K
RV11	1-228-457-00	s RES. ADJ. METAL 2K
RV12	1-228-472-00	s RES. ADJ. METAL 2K
RV14	1-228-462-00	s RES. ADJ. METAL 100K
RV15	1-228-462-00	s RES. ADJ. METAL 100K
RV16	1-228-474-00	s RES. ADJ. METAL 10K
RV17	1-228-457-00	s RES. ADJ. METAL 2K
RV18	1-228-459-00	s RES. ADJ. METAL 10K
RV19	1-228-459-00	s RES. ADJ. METAL 10K
RV20	1-228-471-00	s RES. ADJ. METAL 1K
RV21	1-228-477-00	s RES. ADJ. METAL 100K
RV22	1-228-477-00	s RES. ADJ. METAL 100K
RV23	1-228-477-00	s RES. ADJ. METAL 100K
RV24	1-228-463-00	s RES. ADJ. METAL 200K
RV25	1-228-463-00	s RES. ADJ. METAL 200K
RV26	1-228-463-00	s RES. ADJ. METAL 200K
RV28	1-228-459-00	s RES. ADJ. METAL 10K
RV29	1-228-459-00	s RES. ADJ. METAL 10K
RV30	1-228-459-00	s RES. ADJ. METAL 10K
RV31	1-228-460-00	s RES. ADJ. METAL 20K
RV32	1-228-460-00	s RES. ADJ. METAL 20K
RV33	1-228-460-00	s RES. ADJ. METAL 20K
RV34	1-228-459-00	s RES. ADJ. METAL 10K
RV35	1-228-459-00	s RES. ADJ. METAL 10K
RV36	1-228-459-00	s RES. ADJ. METAL 10K
RV37	1-228-462-00	s RES. ADJ. METAL 100K
RV38	1-228-462-00	s RES. ADJ. METAL 100K
RV39	1-228-462-00	s RES. ADJ. METAL 100K
RV40	1-228-462-00	s RES. ADJ. METAL 100K
RV41	1-228-462-00	s RES. ADJ. METAL 100K
RV42	1-228-462-00	s RES. ADJ. METAL 100K
RV43	1-228-459-00	s RES. ADJ. METAL 10K
RV44	1-228-459-00	s RES. ADJ. METAL 10K
RV45	1-228-459-00	s RES. ADJ. METAL 10K

(VA-86 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
RV46	1-228-460-00	s RES. ADJ. METAL 20K
RV47	1-228-460-00	s RES. ADJ. METAL 20K
RV48	1-228-460-00	s RES. ADJ. METAL 20K
RV49	1-228-472-00	s RES. ADJ. METAL 2K
RV51	1-228-457-00	s RES. ADJ. METAL 2K
RV52	1-228-461-00	s RES. ADJ. METAL 50K
RV54	1-228-461-00	s RES. ADJ. METAL 50K
RV55	1-228-457-00	s RES. ADJ. METAL 2K
RV56	1-228-461-00	s RES. ADJ. METAL 50K
RV57	1-228-460-00	s RES. ADJ. METAL 20K
RV58	1-228-460-00	s RES. ADJ. METAL 20K
RV59	1-228-460-00	s RES. ADJ. METAL 20K
RV60	1-228-461-00	s RES. ADJ. METAL 50K
RV61	1-228-461-00	s RES. ADJ. METAL 50K
RV62	1-228-461-00	s RES. ADJ. METAL 50K
S1	1-571-975-31	s SWITCH, CHIP

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

VA-86 BOARD

Serial No. 40600 - 42700

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-064-A	o MOUNTED CIRCUIT BOARD, VA-86
1pc	2-251-622-00	o LEVER, PC BOARD
18pcs	3-621-124-00	o SPACER
1pc	7-626-317-11	s PIN, SPRING 2.5X6
2pcs	7-628-254-40	s SCREW +PS 2.6X12
4pcs	7-682-902-01	s SCREW +PWH 2.6X4
C19	1-163-082-00	s CERAMIC CHIP 0.5PF 0.25PF 50V
C25	1-124-292-00	s ELECT 33uF 20% 6.3V
C31	1-163-227-11	s CERAMIC CHIP 10PF 5% 50V
C38	1-163-227-11	s CERAMIC CHIP 10PF 5% 50V
C58	1-124-292-00	s ELECT 33uF 20% 6.3V
C62	1-163-082-00	s CERAMIC CHIP 0.5PF 0.25PF 50V
C79	1-163-227-11	s CERAMIC CHIP 10PF 5% 50V
C103	1-163-082-00	s CERAMIC CHIP 0.5PF 0.25PF 50V
C109	1-124-292-00	s ELECT 33uF 20% 6.3V
C115	1-163-227-11	s CERAMIC CHIP 10PF 5% 50V
C122	1-163-227-11	s CERAMIC CHIP 10PF 5% 50V
C145	1-164-309-91	s CERAMIC 0.001uF 1% 50V
C150	1-130-471-00	s MYLAR 0.001uF 5% 50V
C177	1-163-037-11	s CERAMIC CHIP 0.022uF 10% 25V
C179	1-163-037-11	s CERAMIC CHIP 0.022uF 10% 25V
C180	1-163-037-11	s CERAMIC CHIP 0.022uF 10% 25V
C183	1-130-495-00	s MYLAR 0.1uF 5% 50V
C184	1-130-491-00	s MYLAR 0.047uF 5% 50V
C186	1-130-483-00	s MYLAR 0.01uF 5% 50V
C187	1-163-227-11	s CERAMIC CHIP 10PF 5% 50V
C201	1-163-112-00	s CERAMIC 62PF 5% 50V
C202	1-163-112-00	s CERAMIC 62PF 5% 50V
C203	1-163-112-00	s CERAMIC 62PF 5% 50V
C214	1-135-164-21	s TANTALUM CHIP 22uF 10% 20V
C215	1-135-164-21	s TANTALUM CHIP 22uF 10% 20V
C216	1-135-164-21	s TANTALUM CHIP 22uF 10% 20V
C217	1-135-161-21	s TANTALUM CHIP 22uF 10% 10V
C218	1-135-161-21	s TANTALUM CHIP 22uF 10% 10V
C219	1-135-161-21	s TANTALUM CHIP 22uF 10% 10V
C223	1-102-942-00	s CERAMIC 5PF 1PF 50V
C224	1-102-942-00	s CERAMIC 5PF 1PF 50V
C225	1-102-961-00	s CERAMIC 27PF 5% 50V
C226	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C227	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C228	1-163-251-11	s CERAMIC CHIP 100PF 5% 50V
C229	1-124-287-00	s ELECT 10uF 20% 10V
C231	1-135-161-21	s TANTALUM CHIP 22MF 10% 10V
C232	1-135-161-21	s TANTALUM CHIP 22MF 10% 10V
C233	1-135-161-21	s TANTALUM CHIP 22MF 10% 10V
C235	1-135-217-21	s TANTALUM CHIP 15MF 10% 6.3V
C237	1-135-217-21	s TANTALUM CHIP 15MF 10% 6.3V
C239	1-135-217-21	s TANTALUM CHIP 15MF 10% 6.3V
C240	1-102-961-00	s CERAMIC 27PF 5% 50V
C241	1-102-961-00	s CERAMIC 27PF 5% 50V
C242	1-102-961-00	s CERAMIC 27PF 5% 50V
CNI	1-562-730-11	o CONNECTOR, MULTI 90P, MALE
D1	8-719-921-12	s DIODE HZ2BL
D2	8-719-101-64	s DIODE RD6.8EL2
D3	8-719-118-38	s DIODE 1S246A
D4	8-719-101-64	s DIODE RD6.8EL2
D6	8-719-104-31	s DIODE 1S2838

(VA-86 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
D7	8-719-104-34	s DIODE 1S2836
D8	8-719-104-34	s DIODE 1S2836
D10	8-719-104-31	s DIODE 1S2838
D11	8-719-104-31	s DIODE 1S2838
D13	8-719-104-34	s DIODE 1S2836
D15	8-719-104-31	s DIODE 1S2838
D16	8-719-800-76	s DIODE 1SS226
D17	8-719-800-76	s DIODE 1SS226
D18	8-719-800-76	s DIODE 1SS226
D19	8-719-400-18	s DIODE MA152WK
FL1	1-409-427-11	s FILTER, TRAP 14.3MHz
FL2	1-409-427-11	s FILTER, TRAP 14.3MHz
FL3	1-409-427-11	s FILTER, TRAP 14.3MHz
IC1	8-759-906-54	s IC TL064CNS
IC2	8-741-108-20	s IC BX1082
IC3	1-807-422-11	s IC BH-1217
IC4	8-759-981-51	s IC RC1496M
IC5	8-741-108-20	s IC BX1082
IC6	8-759-981-51	s IC RC1496M
IC7	8-759-009-07	s IC MC14053BF
IC8	8-759-100-97	s IC UPC339G2
IC9	8-741-108-20	s IC BX1082
IC10	8-759-030-16	s IC MC34182M
IC11	1-807-422-11	s IC BH-1217
IC12	8-759-981-51	s IC RC1496M
IC13	8-741-108-20	s IC BX1082
IC14	8-759-981-51	s IC RC1496M
IC15	8-741-108-20	s IC BX1082
IC16	1-807-422-11	s IC BH-1217
IC17	8-759-981-51	s IC RC1496M
IC18	8-741-108-20	s IC BX1082
IC19	8-759-981-51	s IC RC1496M
IC20	8-759-008-74	s IC MC14001BF
IC21	8-759-009-07	s IC MC14053BF
IC22	8-759-009-04	s IC MC14050BF
IC23	8-759-009-04	s IC MC14050BF
IC24	8-759-209-57	s IC TC4S69F
IC25	8-759-906-54	s IC TL064CNS
IC26	8-759-013-96	s IC MC74HC4316F
IC27	8-759-906-54	s IC TL064CNS
IC28	8-759-906-54	s IC TL064CNS
IC32	8-759-147-84	s IC CXD8072Q
IC33	8-759-204-90	s IC TC40H374F
IC34	8-759-209-97	s IC TC4S81F
IC35	8-759-008-74	s IC MC14001BF
IC36	8-759-994-64	s IC MB88341PF
IC37	8-759-979-73	s IC TLC27L4CNS
IC38	8-759-009-07	s IC MC14053BF
IC39	8-759-009-07	s IC MC14053BF
IC40	8-759-979-73	s IC TLC27L4CNS
IC41	8-759-906-54	s IC TL064CNS
IC42	8-759-979-73	s IC TLC27L4CNS
IC43	8-759-979-73	s IC TLC27L4CNS
IC44	8-759-009-07	s IC MC14053BF
IC45	8-759-906-54	s IC TL064CNS
IC46	8-759-030-16	s IC MC34182M
IC47	8-759-030-16	s IC MC34182M
IC48	8-759-209-90	s IC TC4S71F

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(VA-86 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q1	8-729-105-29	s TRANSISTOR 2SA1385
Q2	8-729-105-19	s TRANSISTOR 2SC3518
Q3	8-729-105-29	s TRANSISTOR 2SA1385
Q4	8-729-200-87	s TRANSISTOR 2SC2714Y
Q5	8-729-200-87	s TRANSISTOR 2SC2714Y
Q6	8-729-122-63	s TRANSISTOR 2SA1226
Q7	8-729-200-87	s TRANSISTOR 2SC2714Y
Q8	8-729-109-44	s TRANSISTOR 2SK94
Q9	8-729-109-44	s TRANSISTOR 2SK94
Q10	8-729-109-44	s TRANSISTOR 2SK94
Q11	8-729-109-44	s TRANSISTOR 2SK94
Q12	8-729-200-87	s TRANSISTOR 2SC2714Y
Q13	8-729-216-22	s TRANSISTOR 2SA1162
Q14	8-729-216-22	s TRANSISTOR 2SA1162
Q15	8-729-216-22	s TRANSISTOR 2SA1162
Q16	8-729-116-06	s TRANSISTOR 2SK160-K6
Q17	8-729-116-06	s TRANSISTOR 2SK160-K6
Q18	8-729-109-44	s TRANSISTOR 2SK94
Q19	8-729-109-44	s TRANSISTOR 2SK94
Q20	8-729-421-71	s TRANSISTOR 2SK620
Q21	8-729-200-87	s TRANSISTOR 2SC2714Y
Q22	8-729-200-87	s TRANSISTOR 2SC2714Y
Q23	8-729-122-63	s TRANSISTOR 2SA1226
Q24	8-729-200-87	s TRANSISTOR 2SC2714Y
Q25	8-729-200-87	s TRANSISTOR 2SC2714Y
Q28	8-729-216-22	s TRANSISTOR 2SA1162
Q29	8-729-216-22	s TRANSISTOR 2SA1162
Q30	8-729-100-66	s TRANSISTOR 2SC1623
Q31	8-729-100-66	s TRANSISTOR 2SC1623
Q32	8-729-421-71	s TRANSISTOR 2SK620
Q33	8-729-100-66	s TRANSISTOR 2SC1623
Q34	8-729-216-22	s TRANSISTOR 2SA1162
Q35	8-729-216-22	s TRANSISTOR 2SA1162
Q39	8-729-200-87	s TRANSISTOR 2SC2714Y
Q40	8-729-200-87	s TRANSISTOR 2SC2714Y
Q41	8-729-200-87	s TRANSISTOR 2SC2714Y
Q42	8-729-122-63	s TRANSISTOR 2SA1226
Q43	8-729-200-87	s TRANSISTOR 2SC2714Y
Q44	8-729-109-44	s TRANSISTOR 2SK94
Q45	8-729-109-44	s TRANSISTOR 2SK94
Q46	8-729-109-44	s TRANSISTOR 2SK94
Q47	8-729-109-44	s TRANSISTOR 2SK94
Q48	8-729-200-87	s TRANSISTOR 2SC2714Y
Q49	8-729-216-22	s TRANSISTOR 2SA1162
Q50	8-729-216-22	s TRANSISTOR 2SA1162
Q51	8-729-216-22	s TRANSISTOR 2SA1162
Q52	8-729-116-06	s TRANSISTOR 2SK160-K6
Q53	8-729-116-06	s TRANSISTOR 2SK160-K6
Q54	8-729-109-44	s TRANSISTOR 2SK94
Q55	8-729-109-44	s TRANSISTOR 2SK94
Q56	8-729-421-71	s TRANSISTOR 2SK620
Q57	8-729-200-87	s TRANSISTOR 2SC2714Y
Q58	8-729-200-87	s TRANSISTOR 2SC2714Y
Q59	8-729-122-63	s TRANSISTOR 2SA1226
Q60	8-729-100-66	s TRANSISTOR 2SC1623
Q61	8-729-100-66	s TRANSISTOR 2SC1623
Q63	8-729-216-22	s TRANSISTOR 2SA1162
Q64	8-729-216-22	s TRANSISTOR 2SA1162
Q65	8-729-100-66	s TRANSISTOR 2SC1623

(VA-86 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q66	8-729-100-66	s TRANSISTOR 2SC1623
Q67	8-729-421-71	s TRANSISTOR 2SK620
Q68	8-729-100-66	s TRANSISTOR 2SC1623
Q69	8-729-216-22	s TRANSISTOR 2SA1162
Q70	8-729-216-22	s TRANSISTOR 2SA1162
Q71	8-729-200-87	s TRANSISTOR 2SC2714Y
Q72	8-729-200-87	s TRANSISTOR 2SC2714Y
Q73	8-729-122-63	s TRANSISTOR 2SA1226
Q74	8-729-200-87	s TRANSISTOR 2SC2714Y
Q75	8-729-109-44	s TRANSISTOR 2SK94
Q76	8-729-109-44	s TRANSISTOR 2SK94
Q77	8-729-109-44	s TRANSISTOR 2SK94
Q78	8-729-109-44	s TRANSISTOR 2SK94
Q79	8-729-200-87	s TRANSISTOR 2SC2714Y
Q80	8-729-216-22	s TRANSISTOR 2SA1162
Q81	8-729-216-22	s TRANSISTOR 2SA1162
Q82	8-729-216-22	s TRANSISTOR 2SA1162
Q83	8-729-116-06	s TRANSISTOR 2SK160-K6
Q84	8-729-116-06	s TRANSISTOR 2SK160-K6
Q85	8-729-109-44	s TRANSISTOR 2SK94
Q86	8-729-109-44	s TRANSISTOR 2SK94
Q87	8-729-421-71	s TRANSISTOR 2SK620
Q88	8-729-200-87	s TRANSISTOR 2SC2714Y
Q89	8-729-200-87	s TRANSISTOR 2SC2714Y
Q90	8-729-122-63	s TRANSISTOR 2SA1226
Q91	8-729-100-66	s TRANSISTOR 2SC1623
Q93	8-729-216-22	s TRANSISTOR 2SA1162
Q94	8-729-216-22	s TRANSISTOR 2SA1162
Q95	8-729-100-66	s TRANSISTOR 2SC1623
Q96	8-729-100-66	s TRANSISTOR 2SC1623
Q97	8-729-421-71	s TRANSISTOR 2SK620
Q98	8-729-216-22	s TRANSISTOR 2SA1162
Q99	8-729-100-66	s TRANSISTOR 2SC1623
Q100	8-729-216-22	s TRANSISTOR 2SA1162
Q101	8-729-100-66	s TRANSISTOR 2SC1623
Q102	8-729-216-22	s TRANSISTOR 2SA1162
Q103	8-729-100-66	s TRANSISTOR 2SC1623
Q104	8-729-216-22	s TRANSISTOR 2SA1162
Q105	8-729-216-22	s TRANSISTOR 2SA1162
Q107	8-729-100-66	s TRANSISTOR 2SC1623
Q108	8-729-901-06	s TRANSISTOR DTA144EK-46
Q109	8-729-901-06	s TRANSISTOR DTA144EK-46
Q110	8-729-901-06	s TRANSISTOR DTA144EK-46
Q111	8-729-901-06	s TRANSISTOR DTA144EK-46
Q112	8-729-100-66	s TRANSISTOR 2SC1623
Q113	8-729-421-71	s TRANSISTOR 2SK620
Q114	8-729-100-66	s TRANSISTOR 2SC1623
Q115	8-729-421-71	s TRANSISTOR 2SK620
Q116	8-729-100-66	s TRANSISTOR 2SC1623
Q117	8-729-421-71	s TRANSISTOR 2SK620
Q118	8-729-216-22	s TRANSISTOR 2SA1162
Q119	8-729-100-66	s TRANSISTOR 2SC1623
Q120	8-729-100-66	s TRANSISTOR 2SC1623
Q121	8-729-100-66	s TRANSISTOR 2SC1623
Q140	8-729-100-66	s TRANSISTOR 2SC1623
Q141	8-729-100-66	s TRANSISTOR 2SC1623
Q142	8-729-100-66	s TRANSISTOR 2SC1623
Q143	8-729-100-66	s TRANSISTOR 2SC1623
Q144	8-729-100-66	s TRANSISTOR 2SC1623

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(VA-86 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R1	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R2	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R3	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R4	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R5	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R6	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R7	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R8	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R9	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R10	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R11	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R12	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R13	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R14	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R15	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R16	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R17	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R18	1-216-648-11	s METAL CHIP 750 0.50% 1/10W
R19	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R20	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R21	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R22	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R23	1-216-686-11	s METAL CHIP 30K 0.50% 1/10W
R24	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R25	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R26	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R27	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R28	1-216-656-11	s METAL CHIP 1.6K 0.50% 1/10W
R31	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R34	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R35	1-216-674-11	s METAL CHIP 9.1K 0.50% 1/10W
R37	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R38	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R39	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R40	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R41	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R42	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R43	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R44	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R45	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R47	1-216-621-11	s METAL CHIP 56 0.50% 1/10W
R48	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R49	1-216-650-11	s METAL CHIP 910 0.50% 1/10W
R53	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R54	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R55	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R57	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R60	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R61	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R62	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R63	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R64	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R65	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R70	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R71	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R74	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R75	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R76	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W

(VA-86 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R77	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R78	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R79	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R80	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R81	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R82	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R83	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R84	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R85	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R86	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R87	1-216-686-11	s METAL CHIP 30K 0.50% 1/10W
R88	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R90	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R91	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R92	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R93	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R94	1-216-688-11	s METAL CHIP 36K 0.50% 1/10W
R95	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R96	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R97	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R98	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R101	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R102	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R103	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R104	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R105	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R106	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R107	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R108	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R109	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R110	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R111	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R112	1-247-903-00	s CARBON 1M 5% 1/4W
R113	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R114	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R116	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R117	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R118	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R119	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R120	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R121	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R122	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R125	1-216-619-11	s METAL CHIP 47 0.50% 1/10W
R128	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R131	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R132	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R140	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R141	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R142	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R143	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R144	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R145	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R146	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R147	1-216-648-11	s METAL CHIP 750 0.50% 1/10W
R148	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R149	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R150	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R151	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R152	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

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Ref. No. or Q'ty	Part No.	SP Description
R153	1-216-686-11	s METAL CHIP 30K 0.50% 1/10W
R154	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R155	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R156	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R157	1-216-678-11	s METAL CHIP 13K 0.50% 1/10W
R158	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R160	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R161	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R165	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R166	1-216-674-11	s METAL CHIP 9.1K 0.50% 1/10W
R169	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R170	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R171	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R172	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R173	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R174	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R175	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R176	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R177	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R179	1-216-621-11	s METAL CHIP 56 0.50% 1/10W
R180	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R181	1-216-650-11	s METAL CHIP 910 0.50% 1/10W
R185	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R187	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R189	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R190	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R193	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R194	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R195	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R196	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R197	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R200	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R203	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R204	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R207	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R208	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R209	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R210	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R211	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R212	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R213	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R214	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R215	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R216	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R217	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R218	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R219	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R220	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R221	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R222	1-216-686-11	s METAL CHIP 30K 0.50% 1/10W
R223	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R224	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R226	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R227	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R228	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R229	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R230	1-216-688-11	s METAL CHIP 36K 0.50% 1/10W
R231	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R232	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W

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Ref. No. or Q'ty	Part No.	SP Description
R233	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R234	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R237	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R238	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R240	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R241	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R242	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R243	1-216-656-11	s METAL CHIP 1.6K 0.50% 1/10W
R245	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R246	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R247	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R248	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R249	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R250	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R251	1-247-903-00	s CARBON 1M 5% 1/4W
R252	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R253	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R254	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R256	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R257	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R258	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R259	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R260	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R261	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R262	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R263	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R264	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R265	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R266	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R267	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R268	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R269	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R270	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R271	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R272	1-216-648-11	s METAL CHIP 750 0.50% 1/10W
R273	1-216-645-11	s METAL CHIP 560 0.50% 1/10W
R274	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R275	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R276	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R277	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R278	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R279	1-216-671-11	s METAL CHIP 6.8K 0.50% 1/10W
R280	1-216-639-11	s METAL CHIP 330 0.50% 1/10W
R281	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R282	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R285	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R288	1-216-637-11	s METAL CHIP 270 0.50% 1/10W
R289	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R290	1-216-674-11	s METAL CHIP 9.1K 0.50% 1/10W
R293	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R294	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R295	1-216-672-11	s METAL CHIP 7.5K 0.50% 1/10W
R296	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R297	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R298	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R299	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R300	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R302	1-216-621-11	s METAL CHIP 56 0.50% 1/10W
R303	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

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Ref. No. or Q'ty	Part No.	SP Description
R304	1-216-650-11	s METAL CHIP 910 0.50% 1/10W
R308	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R310	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R312	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R313	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R316	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R317	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R318	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R319	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R320	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R323	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R326	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R327	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R330	1-216-664-11	s METAL CHIP 3.6K 0.50% 1/10W
R331	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R332	1-216-662-11	s METAL CHIP 3K 0.50% 1/10W
R333	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R334	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R335	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R336	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R337	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R338	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R339	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R340	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R341	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R342	1-216-666-11	s METAL CHIP 4.3K 0.50% 1/10W
R343	1-216-657-11	s METAL CHIP 1.8K 0.50% 1/10W
R344	1-216-686-11	s METAL CHIP 30K 0.50% 1/10W
R346	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R347	1-216-687-11	s METAL CHIP 33K 0.50% 1/10W
R348	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R349	1-216-655-11	s METAL CHIP 1.5K 0.50% 1/10W
R350	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R351	1-216-677-11	s METAL CHIP 12K 0.50% 1/10W
R352	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R353	1-216-688-11	s METAL CHIP 36K 0.50% 1/10W
R354	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R355	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R356	1-216-635-11	s METAL CHIP 220 0.50% 1/10W
R359	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R360	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R361	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R362	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W
R363	1-216-631-11	s METAL CHIP 150 0.50% 1/10W
R364	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R365	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R366	1-216-661-11	s METAL CHIP 2.7K 0.50% 1/10W
R367	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R368	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R369	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R370	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R371	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R372	1-247-903-00	s CARBON 1M 5% 1/4W
R373	1-216-641-11	s METAL CHIP 390 0.50% 1/10W
R375	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R376	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R377	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R378	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R380	1-216-667-11	s METAL CHIP 4.7K 0.50% 1/10W

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Ref. No. or Q'ty	Part No.	SP Description
R381	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R384	1-216-656-11	s METAL CHIP 1.6K 0.50% 1/10W
R388	1-216-691-11	s METAL CHIP 47K 0.50% 1/10W
R389	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R390	1-216-683-11	s METAL CHIP 22K 0.50% 1/10W
R394	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R395	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R402	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R403	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R426	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R427	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R428	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R429	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R430	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R431	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R438	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R439	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R441	1-216-619-11	s METAL CHIP 47 0.50% 1/10W
R458	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R459	1-216-619-11	s METAL CHIP 47 0.50% 1/10W
R462	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R463	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R465	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R467	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R469	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R471	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R473	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R491	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R492	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R493	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R494	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R495	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R496	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R507	1-216-678-11	s METAL CHIP 13K 0.50% 1/10W
R509	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R510	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R511	1-216-696-11	s METAL CHIP 75K 0.50% 1/10W
R512	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R513	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R514	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R515	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R516	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R517	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R540	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R541	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R543	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R544	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R546	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R547	1-216-658-11	s METAL CHIP 2K 0.50% 1/10W
R550	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R553	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R554	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R556	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R557	1-216-659-11	s METAL CHIP 2.2K 0.50% 1/10W
R567	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R568	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R569	1-216-679-11	s METAL CHIP 15K 0.50% 1/10W
R587	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R588	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(VA-86 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R589	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R590	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R591	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R592	1-216-665-11	s METAL CHIP 3.9K 0.50% 1/10W
R596	1-216-685-11	s METAL CHIP 27K 0.50% 1/10W
R597	1-216-681-11	s METAL CHIP 18K 0.50% 1/10W
R598	1-216-689-11	s METAL CHIP 39K 0.50% 1/10W
R599	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R600	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R601	1-216-663-11	s METAL CHIP 3.3K 0.50% 1/10W
R605	1-216-128-11	s METAL CHIP 2M 5% 1/10W
R606	1-216-128-11	s METAL CHIP 2M 5% 1/10W
R607	1-216-268-00	s METAL 820K 5% 1/8W
R608	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R609	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R610	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R615	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R616	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R617	1-216-669-11	s METAL CHIP 5.6K 0.50% 1/10W
R627	1-215-480-00	s METAL 300K 1% 1/6W
R628	1-215-480-00	s METAL 300K 1% 1/6W
R629	1-215-480-00	s METAL 300K 1% 1/6W
RV1	1-228-456-00	s RES. ADJ. METAL 1K
RV2	1-228-472-00	s RES. ADJ. METAL 2K
RV4	1-228-462-00	s RES. ADJ. METAL 100K
RV5	1-228-462-00	s RES. ADJ. METAL 100K
RV6	1-228-474-00	s RES. ADJ. METAL 10K
RV7	1-228-457-00	s RES. ADJ. METAL 2K
RV8	1-228-462-00	s RES. ADJ. METAL 100K
RV9	1-228-462-00	s RES. ADJ. METAL 100K
RV10	1-228-474-00	s RES. ADJ. METAL 10K
RV11	1-228-457-00	s RES. ADJ. METAL 2K
RV12	1-228-472-00	s RES. ADJ. METAL 2K
RV14	1-228-462-00	s RES. ADJ. METAL 100K
RV15	1-228-462-00	s RES. ADJ. METAL 100K
RV16	1-228-474-00	s RES. ADJ. METAL 10K
RV17	1-228-457-00	s RES. ADJ. METAL 2K
RV18	1-228-459-00	s RES. ADJ. METAL 10K
RV19	1-228-459-00	s RES. ADJ. METAL 10K
RV20	1-228-471-00	s RES. ADJ. METAL 1K
RV21	1-228-477-00	s RES. ADJ. METAL 100K
RV22	1-228-477-00	s RES. ADJ. METAL 100K
RV23	1-228-477-00	s RES. ADJ. METAL 100K
RV24	1-228-463-00	s RES. ADJ. METAL 200K
RV25	1-228-463-00	s RES. ADJ. METAL 200K
RV26	1-228-463-00	s RES. ADJ. METAL 200K
RV28	1-228-459-00	s RES. ADJ. METAL 10K
RV29	1-228-459-00	s RES. ADJ. METAL 10K
RV30	1-228-459-00	s RES. ADJ. METAL 10K
RV31	1-228-460-00	s RES. ADJ. METAL 20K
RV32	1-228-460-00	s RES. ADJ. METAL 20K
RV33	1-228-460-00	s RES. ADJ. METAL 20K
RV34	1-228-459-00	s RES. ADJ. METAL 10K
RV35	1-228-459-00	s RES. ADJ. METAL 10K
RV36	1-228-459-00	s RES. ADJ. METAL 10K
RV37	1-228-462-00	s RES. ADJ. METAL 100K
RV38	1-228-462-00	s RES. ADJ. METAL 100K
RV39	1-228-462-00	s RES. ADJ. METAL 100K

(VA-86 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
RV40	1-228-462-00	s RES. ADJ. METAL 100K
RV41	1-228-462-00	s RES. ADJ. METAL 100K
RV42	1-228-462-00	s RES. ADJ. METAL 100K
RV43	1-228-459-00	s RES. ADJ. METAL 10K
RV44	1-228-459-00	s RES. ADJ. METAL 10K
RV45	1-228-459-00	s RES. ADJ. METAL 10K
RV46	1-228-460-00	s RES. ADJ. METAL 20K
RV47	1-228-460-00	s RES. ADJ. METAL 20K
RV48	1-228-460-00	s RES. ADJ. METAL 20K
RV49	1-228-472-00	s RES. ADJ. METAL 2K
RV51	1-228-457-00	s RES. ADJ. METAL 2K
RV52	1-228-461-00	s RES. ADJ. METAL 50K
RV54	1-228-461-00	s RES. ADJ. METAL 50K
RV55	1-228-457-00	s RES. ADJ. METAL 2K
RV56	1-228-461-00	s RES. ADJ. METAL 50K
RV57	1-228-460-00	s RES. ADJ. METAL 20K
RV58	1-228-460-00	s RES. ADJ. METAL 20K
RV59	1-228-460-00	s RES. ADJ. METAL 20K
RV60	1-228-461-00	s RES. ADJ. METAL 50K
RV61	1-228-461-00	s RES. ADJ. METAL 50K
RV62	1-228-461-00	s RES. ADJ. METAL 50K
SI	1-571-975-31	s SWITCH. CHIP

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

VA-131A BOARD

Serial No. 42701 -

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8271-927-A	o MOUNTED CIRCUIT BOARD, VA-131A
4pcs	7-682-902-01	s SCREW +PWH 2.6X4
2pcs	7-628-254-40	s SCREW +PS 2.6X12
C100	1-128-297-41	s ELECT 56uF 20% 16V
C101	1-128-283-11	s ELECT 100uF 20% 6.3V
C104	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C105	1-135-318-11	s TANTALUM, CHIP 33uF 20% 4V
C106	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C107	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C109	1-128-283-11	s ELECT 100uF 20% 6.3V
C111	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C117	1-128-283-11	s ELECT 100uF 20% 6.3V
C121	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C122	1-135-318-11	s TANTALUM, CHIP 33uF 20% 4V
C123	1-128-297-41	s ELECT 56uF 20% 16V
C124	1-135-210-11	s TANTALUM, CHIP 4.7uF 10% 10V
C125	1-135-210-11	s TANTALUM, CHIP 4.7uF 10% 10V
C128	1-163-224-11	s CERAMIC, CHIP 7PF 0.25PF 50V
C130	1-128-283-11	s ELECT 100uF 20% 6.3V
C131	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C132	1-128-283-11	s ELECT 100uF 20% 6.3V
C133	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C135	1-135-318-11	s TANTALUM, CHIP 33uF 20% 4V
C136	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C138	1-135-217-21	s TANTALUM, CHIP 15uF 10% 6.3
C139	1-128-297-41	s ELECT 56uF 20% 16V
C140	1-135-179-21	s TANTALUM, CHIP 2.2uF 10% 16V
C141	1-135-179-21	s TANTALUM, CHIP 2.2uF 10% 16V
C144	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C145	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C146	1-135-177-21	s TANTALUM, CHIP 1uF 10% 25V
C153	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C156	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C157	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C158	1-135-215-21	s TANTALUM, CHIP 6.8uF 20% 16V
C159	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C160	1-135-215-21	s TANTALUM, CHIP 6.8uF 20% 16V
C161	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C162	1-163-234-11	s CERAMIC, CHIP 20PF 5% 50V
C163	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C164	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C165	1-163-220-11	s CERAMIC, CHIP 3PF 0.25PF 50V
C167	1-135-318-11	s TANTALUM, CHIP 33uF 20% 4V
C300	1-128-297-41	s ELECT 56uF 20% 16V
C301	1-128-283-11	s ELECT 100uF 20% 6.3V
C304	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C305	1-135-318-11	s TANTALUM, CHIP 33uF 20% 4V
C306	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C307	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C309	1-128-283-11	s ELECT 100uF 20% 6.3V
C311	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C317	1-128-283-11	s ELECT 100uF 20% 6.3V
C321	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C322	1-135-318-11	s TANTALUM, CHIP 33uF 20% 4V
C323	1-128-297-41	s ELECT 56uF 20% 16V
C324	1-135-210-11	s TANTALUM, CHIP 4.7uF 10% 10V
C325	1-135-210-11	s TANTALUM, CHIP 4.7uF 10% 10V
C328	1-163-224-11	s CERAMIC, CHIP 7PF 0.25PF 50V

(VA-131A BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C330	1-128-283-11	s ELECT 100uF 20% 6.3V
C331	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C332	1-128-283-11	s ELECT 100uF 20% 6.3V
C333	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C335	1-135-318-11	s TANTALUM, CHIP 33uF 20% 4V
C336	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C338	1-135-217-21	s TANTALUM, CHIP 15uF 10% 6.3
C339	1-128-297-41	s ELECT 56uF 20% 16V
C340	1-135-179-21	s TANTALUM, CHIP 2.2uF 10% 16V
C341	1-135-179-21	s TANTALUM, CHIP 2.2uF 10% 16V
C344	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C345	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C346	1-135-177-21	s TANTALUM, CHIP 1uF 10% 25V
C351	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C356	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C357	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C358	1-135-215-21	s TANTALUM, CHIP 6.8uF 20% 16V
C359	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C360	1-135-215-21	s TANTALUM, CHIP 6.8uF 20% 16V
C361	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C362	1-163-234-11	s CERAMIC, CHIP 20PF 5% 50V
C363	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C364	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C365	1-163-220-11	s CERAMIC, CHIP 3PF 0.25PF 50V
C367	1-135-318-11	s TANTALUM, CHIP 33uF 20% 4V
C500	1-128-297-41	s ELECT 56uF 20% 16V
C501	1-128-283-11	s ELECT 100uF 20% 6.3V
C504	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C505	1-135-318-11	s TANTALUM, CHIP 33uF 20% 4V
C506	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C507	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C509	1-128-283-11	s ELECT 100uF 20% 6.3V
C511	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C517	1-128-283-11	s ELECT 100uF 20% 6.3V
C521	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C522	1-135-318-11	s TANTALUM, CHIP 33uF 20% 4V
C523	1-128-297-41	s ELECT 56uF 20% 16V
C524	1-135-210-11	s TANTALUM, CHIP 4.7uF 10% 10V
C525	1-135-210-11	s TANTALUM, CHIP 4.7uF 10% 10V
C528	1-163-224-11	s CERAMIC, CHIP 7PF 0.25PF 50V
C530	1-128-283-11	s ELECT 100uF 20% 6.3V
C531	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C532	1-128-283-11	s ELECT 100uF 20% 6.3V
C533	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C535	1-135-318-11	s TANTALUM, CHIP 33uF 20% 4V
C536	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C538	1-135-217-21	s TANTALUM, CHIP 15uF 10% 6.3
C539	1-128-297-41	s ELECT 56uF 20% 16V
C540	1-135-179-21	s TANTALUM, CHIP 2.2uF 10% 16V
C541	1-135-179-21	s TANTALUM, CHIP 2.2uF 10% 16V
C544	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C545	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C546	1-135-177-21	s TANTALUM, CHIP 1uF 10% 25V
C554	1-135-259-11	s TANTALUM, CHIP 10uF 20% 6.3V
C557	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C558	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C559	1-135-215-21	s TANTALUM, CHIP 6.8uF 20% 16V
C560	1-135-216-11	s TANTALUM, CHIP 10uF 20% 10V
C561	1-135-215-21	s TANTALUM, CHIP 6.8uF 20% 16V

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(VA-131A BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C562	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C563	1-163-234-11	s	CERAMIC, CHIP 20PF 5% 50V
C564	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C565	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C566	1-163-220-11	s	CERAMIC, CHIP 3PF 0.25PF 50V
C567	1-135-318-11	s	TANTALUM, CHIP 33uF 20% 4V
C701	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C702	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C703	1-135-215-21	s	TANTALUM, CHIP 6.8uF 20% 16V
C704	1-135-070-00	s	TANTALUM, CHIP 0.1uF 10% 35V
C705	1-135-070-00	s	TANTALUM, CHIP 0.1uF 10% 35V
C706	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C707	1-135-070-00	s	TANTALUM, CHIP 0.1uF 10% 35V
C708	1-135-070-00	s	TANTALUM, CHIP 0.1uF 10% 35V
C709	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C710	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C711	1-135-070-00	s	TANTALUM, CHIP 0.1uF 10% 35V
C712	1-135-070-00	s	TANTALUM, CHIP 0.1uF 10% 35V
C713	1-135-070-00	s	TANTALUM, CHIP 0.1uF 10% 35V
C714	1-135-215-21	s	TANTALUM, CHIP 6.8uF 20% 16V
C716	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C717	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C719	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C721	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C725	1-135-215-21	s	TANTALUM, CHIP 6.8uF 20% 16V
C726	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C727	1-163-263-11	s	CERAMIC, CHIP 330PF 5% 50V
C728	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C729	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C730	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C731	1-135-259-11	s	TANTALUM, CHIP 10uF 20% 6.3V
C733	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C734	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C735	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C736	1-137-298-11	s	FILM 0.022uF 5% 16V
C738	1-137-298-11	s	FILM 0.022uF 5% 16V
C739	1-137-298-11	s	FILM 0.022uF 5% 16V
C740	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C741	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C742	1-137-306-11	s	FILM 0.1uF 5% 16V
C743	1-137-302-11	s	FILM 0.047uF 5% 16V
C745	1-135-259-11	s	TANTALUM, CHIP 10uF 20% 6.3V
C747	1-137-298-11	s	FILM 0.022uF 5% 16V
C748	1-135-259-11	s	TANTALUM, CHIP 10uF 20% 6.3V
C749	1-135-259-11	s	TANTALUM, CHIP 10uF 20% 6.3V
CN1	1-562-730-11	o	CONNECTOR, MULTI 90P, MALE
D101	8-719-104-34	s	DIODE 1S2836
D301	8-719-104-34	s	DIODE 1S2836
D501	8-719-104-34	s	DIODE 1S2836
D502	8-719-800-76	s	DIODE 1SS226
D701	8-719-159-85	s	DIODE RD2.0MB
D702	8-719-157-36	s	DIODE RD6.8M-B
D703	8-719-118-38	s	DIODE 1SZ46A
D704	8-719-157-36	s	DIODE RD6.8M-B
D705	8-719-104-34	s	DIODE 1S2836
D706	8-719-400-18	s	DIODE MA152WK
FL100	1-239-644-11	s	FILTER, TRAP
FL300	1-239-644-11	s	FILTER, TRAP

(VA-131A BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
FL500	1-239-644-11	s	FILTER, TRAP
IC100	8-759-067-37	s	IC TLC277CPS
IC103	8-759-242-64	s	IC TC4W53F
IC104	8-759-030-55	s	IC MC1496M
IC105	8-759-906-53	s	IC TL062CPS
IC106	8-759-242-64	s	IC TC4W53F
IC107	8-759-030-55	s	IC MC1496M
IC108	8-759-242-64	s	IC TC4W53F
IC300	8-759-067-37	s	IC TLC277CPS
IC303	8-759-242-64	s	IC TC4W53F
IC304	8-759-030-55	s	IC MC1496M
IC305	8-759-906-53	s	IC TL062CPS
IC306	8-759-242-64	s	IC TC4W53F
IC307	8-759-030-55	s	IC MC1496M
IC500	8-759-067-37	s	IC TLC277CPS
IC504	8-759-242-64	s	IC TC4W53F
IC505	8-759-030-55	s	IC MC1496M
IC506	8-759-906-53	s	IC TL062CPS
IC507	8-759-242-64	s	IC TC4W53F
IC508	8-759-030-55	s	IC MC1496M
IC509	8-759-234-77	s	IC TC4S66F
IC511	8-759-204-51	s	IC TC40H008F
IC512	8-759-209-57	s	IC TC4S69F
IC701	8-759-906-54	s	IC TL064CNS
IC702	8-759-008-74	s	IC MC14001BF
IC703	8-759-209-97	s	IC TC4S81F
IC704	8-759-009-19	s	IC MC14081BF
IC705	8-759-008-74	s	IC MC14001BF
IC706	8-759-009-04	s	IC MC14050BF
IC707	8-759-147-84	s	IC CXD8072Q
IC708	8-759-009-12	s	IC MC14071BF
IC709	8-759-209-97	s	IC TC4S81F
IC710	8-759-008-74	s	IC MC14001BF
IC711	8-759-209-57	s	IC TC4S69F
IC712	8-759-635-27	s	IC M62352GP
IC713	8-759-209-57	s	IC TC4S69F
IC714	8-759-906-54	s	IC TL064CNS
IC715	8-759-013-96	s	IC MC74HC4316F
IC716	8-759-906-54	s	IC TL064CNS
IC717	8-759-906-54	s	IC TL064CNS
IC718	8-759-906-54	s	IC TL064CNS
IC719	8-759-906-54	s	IC TL064CNS
IC720	8-759-300-71	s	IC MC14053BF
IC721	8-759-300-71	s	IC MC14053BF
IC722	8-759-300-71	s	IC MC14053BF
IC723	8-759-928-08	s	IC TLC27M4CNS
L100	1-412-026-11	s	INDUCTOR, CHIP 1uH
L101	1-412-026-11	s	INDUCTOR, CHIP 1uH
L102	1-412-026-11	s	INDUCTOR, CHIP 1uH
L300	1-412-026-11	s	INDUCTOR, CHIP 1uH
L301	1-412-026-11	s	INDUCTOR, CHIP 1uH
L302	1-412-026-11	s	INDUCTOR, CHIP 1uH
L500	1-412-026-11	s	INDUCTOR, CHIP 1uH
L501	1-412-026-11	s	INDUCTOR, CHIP 1uH
L502	1-412-026-11	s	INDUCTOR, CHIP 1uH
L701	1-412-029-11	s	INDUCTOR, CHIP 10uH
L702	1-412-029-11	s	INDUCTOR, CHIP 10uH
L703	1-412-029-11	s	INDUCTOR, CHIP 10uH

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(VA-131A BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
L704	1-412-026-11	s	INDUCTOR, CHIP 1uH
L705	1-412-026-11	s	INDUCTOR, CHIP 1uH
L706	1-412-026-11	s	INDUCTOR, CHIP 1uH
L707	1-412-026-11	s	INDUCTOR, CHIP 1uH
L708	1-412-026-11	s	INDUCTOR, CHIP 1uH
L709	1-412-026-11	s	INDUCTOR, CHIP 1uH
L710	1-412-026-11	s	INDUCTOR, CHIP 1uH
Q101	8-729-403-32	s	TRANSISTOR XN6534
Q102	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q103	8-729-403-29	s	TRANSISTOR XN6435
Q104	8-729-216-22	s	TRANSISTOR 2SA1162
Q105	8-729-403-32	s	TRANSISTOR XN6534
Q106	8-729-109-44	s	TRANSISTOR 2SK94
Q108	8-729-402-19	s	TRANSISTOR XN6501
Q109	8-729-403-32	s	TRANSISTOR XN6534
Q110	8-729-403-29	s	TRANSISTOR XN6435
Q111	8-729-216-22	s	TRANSISTOR 2SA1162
Q113	8-729-216-22	s	TRANSISTOR 2SA1162
Q114	8-729-109-44	s	TRANSISTOR 2SK94
Q115	8-729-403-32	s	TRANSISTOR XN6534
Q117	8-729-403-29	s	TRANSISTOR XN6435
Q118	8-729-216-22	s	TRANSISTOR 2SA1162
Q120	8-729-216-22	s	TRANSISTOR 2SA1162
Q121	8-729-109-44	s	TRANSISTOR 2SK94
Q122	8-729-403-29	s	TRANSISTOR XN6435
Q125	8-729-200-86	s	TRANSISTOR 2SC2714-0
Q126	8-729-216-22	s	TRANSISTOR 2SA1162
Q127	8-729-403-29	s	TRANSISTOR XN6435
Q128	8-765-930-11	s	TRANSISTOR 3SK163-3
Q129	8-765-930-11	s	TRANSISTOR 3SK163-3
Q130	8-765-930-11	s	TRANSISTOR 3SK163-3
Q131	8-765-930-11	s	TRANSISTOR 3SK163-3
Q132	8-765-930-11	s	TRANSISTOR 3SK163-3
Q133	8-765-930-11	s	TRANSISTOR 3SK163-3
Q217	8-729-403-32	s	TRANSISTOR XN6534
Q301	8-729-403-32	s	TRANSISTOR XN6534
Q302	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q303	8-729-403-29	s	TRANSISTOR XN6435
Q304	8-729-216-22	s	TRANSISTOR 2SA1162
Q305	8-729-403-32	s	TRANSISTOR XN6534
Q306	8-729-109-44	s	TRANSISTOR 2SK94
Q308	8-729-402-19	s	TRANSISTOR XN6501
Q309	8-729-403-32	s	TRANSISTOR XN6534
Q310	8-729-403-29	s	TRANSISTOR XN6435
Q311	8-729-216-22	s	TRANSISTOR 2SA1162
Q313	8-729-216-22	s	TRANSISTOR 2SA1162
Q314	8-729-109-44	s	TRANSISTOR 2SK94
Q315	8-729-403-32	s	TRANSISTOR XN6534
Q317	8-729-403-29	s	TRANSISTOR XN6435
Q318	8-729-216-22	s	TRANSISTOR 2SA1162
Q320	8-729-216-22	s	TRANSISTOR 2SA1162
Q321	8-729-109-44	s	TRANSISTOR 2SK94
Q322	8-729-403-29	s	TRANSISTOR XN6435
Q325	8-729-200-86	s	TRANSISTOR 2SC2714-0
Q326	8-729-216-22	s	TRANSISTOR 2SA1162
Q327	8-729-403-32	s	TRANSISTOR XN6534
Q328	8-765-930-11	s	TRANSISTOR 3SK163-3
Q329	8-765-930-11	s	TRANSISTOR 3SK163-3

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Ref. No. or Q'ty	Part No.	SP	Description
Q330	8-765-930-11	s	TRANSISTOR 3SK163-3
Q331	8-765-930-11	s	TRANSISTOR 3SK163-3
Q332	8-765-930-11	s	TRANSISTOR 3SK163-3
Q333	8-765-930-11	s	TRANSISTOR 3SK163-3
Q334	8-729-403-29	s	TRANSISTOR XN6435
Q501	8-729-403-32	s	TRANSISTOR XN6534
Q502	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q503	8-729-403-29	s	TRANSISTOR XN6435
Q504	8-729-216-22	s	TRANSISTOR 2SA1162
Q505	8-729-403-32	s	TRANSISTOR XN6534
Q506	8-729-109-44	s	TRANSISTOR 2SK94
Q508	8-729-402-19	s	TRANSISTOR XN6501
Q509	8-729-403-32	s	TRANSISTOR XN6534
Q510	8-729-403-29	s	TRANSISTOR XN6435
Q511	8-729-216-22	s	TRANSISTOR 2SA1162
Q513	8-729-216-22	s	TRANSISTOR 2SA1162
Q514	8-729-109-44	s	TRANSISTOR 2SK94
Q515	8-729-403-32	s	TRANSISTOR XN6534
Q517	8-729-403-29	s	TRANSISTOR XN6435
Q518	8-729-216-22	s	TRANSISTOR 2SA1162
Q520	8-729-216-22	s	TRANSISTOR 2SA1162
Q521	8-729-109-44	s	TRANSISTOR 2SK94
Q522	8-729-403-29	s	TRANSISTOR XN6435
Q525	8-729-200-86	s	TRANSISTOR 2SC2714-0
Q526	8-729-216-22	s	TRANSISTOR 2SA1162
Q527	8-729-403-32	s	TRANSISTOR XN6534
Q528	8-765-930-11	s	TRANSISTOR 3SK163-3
Q529	8-765-930-11	s	TRANSISTOR 3SK163-3
Q530	8-765-930-11	s	TRANSISTOR 3SK163-3
Q531	8-765-930-11	s	TRANSISTOR 3SK163-3
Q532	8-765-930-11	s	TRANSISTOR 3SK163-3
Q533	8-765-930-11	s	TRANSISTOR 3SK163-3
Q536	8-729-901-01	s	TRANSISTOR DTA144EK
Q537	8-729-403-29	s	TRANSISTOR XN6435
Q701	8-729-101-07	s	TRANSISTOR 2SB798
Q702	8-729-807-50	s	TRANSISTOR 2SD1623
Q703	8-729-101-07	s	TRANSISTOR 2SB798
Q704	8-729-216-22	s	TRANSISTOR 2SA1162
Q705	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q706	8-729-216-22	s	TRANSISTOR 2SA1162
Q707	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q708	8-729-216-22	s	TRANSISTOR 2SA1162
Q709	8-729-216-22	s	TRANSISTOR 2SA1162
Q710	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q711	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q712	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q713	8-729-901-06	s	TRANSISTOR DTA144EK
Q714	8-729-901-06	s	TRANSISTOR DTA144EK
Q715	8-729-901-06	s	TRANSISTOR DTA144EK
Q716	8-729-901-06	s	TRANSISTOR DTA144EK
Q717	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q718	8-729-421-71	s	TRANSISTOR 2SK620
Q719	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q720	8-729-421-71	s	TRANSISTOR 2SK620
Q721	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q722	8-729-421-71	s	TRANSISTOR 2SK620
R28	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R100	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(VA-131A BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R101	1-216-682-11	s METAL, CHIP 20K 0.5% 1/10W
R102	1-216-645-11	s METAL, CHIP 560 0.5% 1/10W
R103	1-216-603-11	s METAL, CHIP 10 0.5% 1/10W
R104	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R105	1-216-641-11	s METAL, CHIP 390 0.5% 1/10W
R106	1-216-641-11	s METAL, CHIP 390 0.5% 1/10W
R107	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R108	1-216-656-11	s METAL, CHIP 1.6K 0.5% 1/10W
R110	1-216-679-11	s METAL, CHIP 15K 0.5% 1/10W
R111	1-216-645-11	s METAL, CHIP 560 0.5% 1/10W
R112	1-216-669-11	s METAL, CHIP 5.6K 0.5% 1/10W
R113	1-216-644-11	s METAL, CHIP 510 0.5% 1/10W
R114	1-216-657-11	s METAL, CHIP 1.8K 0.5% 1/10W
R115	1-216-660-11	s METAL, CHIP 2.4K 0.5% 1/10W
R116	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R117	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R118	1-216-669-11	s METAL, CHIP 5.6K 0.5% 1/10W
R120	1-216-673-11	s METAL, CHIP 8.2K 0.5% 1/10W
R121	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R122	1-216-611-11	s METAL, CHIP 22 0.5% 1/10W
R123	1-216-635-11	s METAL, CHIP 220 0.5% 1/10W
R124	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R125	1-216-653-11	s METAL, CHIP 1.2K 0.5% 1/10W
R126	1-216-661-11	s METAL, CHIP 2.7K 0.5% 1/10W
R127	1-216-661-11	s METAL, CHIP 2.7K 0.5% 1/10W
R128	1-216-659-11	s METAL, CHIP 2.2K 0.5% 1/10W
R129	1-216-635-11	s METAL, CHIP 220 0.5% 1/10W
R130	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R131	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R135	1-216-668-11	s METAL, CHIP 5.1K 0.5% 1/10W
R136	1-216-658-11	s METAL, CHIP 2K 0.5% 1/10W
R137	1-216-652-11	s METAL, CHIP 1.1K 0.5% 1/10W
R140	1-216-640-11	s METAL, CHIP 360 0.5% 1/10W
R141	1-216-646-11	s METAL, CHIP 620 0.5% 1/10W
R143	1-216-683-11	s METAL, CHIP 22K 0.5% 1/10W
R144	1-216-668-11	s METAL, CHIP 5.1K 0.5% 1/10W
R145	1-216-672-11	s METAL, CHIP 7.5K 0.5% 1/10W
R146	1-216-664-11	s METAL, CHIP 3.6K 0.5% 1/10W
R147	1-216-663-11	s METAL, CHIP 3.3K 0.5% 1/10W
R148	1-216-669-11	s METAL, CHIP 5.6K 0.5% 1/10W
R149	1-216-676-11	s METAL, CHIP 11K 0.5% 1/10W
R150	1-216-663-11	s METAL, CHIP 3.3K 0.5% 1/10W
R151	1-216-663-11	s METAL, CHIP 3.3K 0.5% 1/10W
R152	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R153	1-218-768-11	s METAL, CHIP 470K 0.50% 1/10W
R155	1-216-687-11	s METAL, CHIP 33K 0.5% 1/10W
R156	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R158	1-216-661-11	s METAL, CHIP 2.7K 0.5% 1/10W
R159	1-216-679-11	s METAL, CHIP 15K 0.5% 1/10W
R161	1-216-683-11	s METAL, CHIP 22K 0.5% 1/10W
R162	1-216-645-11	s METAL, CHIP 560 0.5% 1/10W
R163	1-216-659-11	s METAL, CHIP 2.2K 0.5% 1/10W
R164	1-216-661-11	s METAL, CHIP 2.7K 0.5% 1/10W
R165	1-216-679-11	s METAL, CHIP 15K 0.5% 1/10W
R166	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R167	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R168	1-216-671-11	s METAL, CHIP 6.8K 0.5% 1/10W
R169	1-216-663-11	s METAL, CHIP 3.3K 0.5% 1/10W
R170	1-216-634-11	s METAL, CHIP 200 0.5% 1/10W

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Ref. No. or Q'ty	Part No.	SP Description
R171	1-218-766-11	s METAL, CHIP 390K 0.50% 1/10W
R172	1-216-634-11	s METAL, CHIP 200 0.5% 1/10W
R173	1-216-673-11	s METAL, CHIP 8.2K 0.5% 1/10W
R174	1-216-670-11	s METAL, CHIP 6.2K 0.5% 1/10W
R175	1-216-691-11	s METAL, CHIP 47K 0.5% 1/10W
R176	1-216-683-11	s METAL, CHIP 22K 0.5% 1/10W
R177	1-216-671-11	s METAL, CHIP 6.8K 0.5% 1/10W
R178	1-216-644-11	s METAL, CHIP 510 0.5% 1/10W
R179	1-216-669-11	s METAL, CHIP 5.6K 0.5% 1/10W
R180	1-216-671-11	s METAL, CHIP 6.8K 0.5% 1/10W
R182	1-216-670-11	s METAL, CHIP 6.2K 0.5% 1/10W
R183	1-216-643-11	s METAL, CHIP 470 0.5% 1/10W
R184	1-216-665-11	s METAL, CHIP 3.9K 0.5% 1/10W
R185	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R186	1-216-635-11	s METAL, CHIP 220 0.5% 1/10W
R187	1-216-687-11	s METAL, CHIP 33K 0.5% 1/10W
R189	1-216-635-11	s METAL, CHIP 220 0.5% 1/10W
R190	1-216-659-11	s METAL, CHIP 2.2K 0.5% 1/10W
R191	1-216-645-11	s METAL, CHIP 560 0.5% 1/10W
R192	1-216-631-11	s METAL, CHIP 150 0.5% 1/10W
R193	1-216-669-11	s METAL, CHIP 5.6K 0.5% 1/10W
R194	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R195	1-216-658-11	s METAL, CHIP 2K 0.5% 1/10W
R196	1-216-699-11	s METAL, CHIP 100K 0.5% 1/10W
R197	1-216-671-11	s METAL, CHIP 6.8K 0.5% 1/10W
R198	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R199	1-216-663-11	s METAL, CHIP 3.3K 0.5% 1/10W
R200	1-216-664-11	s METAL, CHIP 3.6K 0.5% 1/10W
R201	1-216-634-11	s METAL, CHIP 200 0.5% 1/10W
R202	1-216-634-11	s METAL, CHIP 200 0.5% 1/10W
R203	1-218-768-11	s METAL, CHIP 470K 0.50% 1/10W
R204	1-216-659-11	s METAL, CHIP 2.2K 0.5% 1/10W
R205	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R206	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R207	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R208	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R209	1-216-673-11	s METAL, CHIP 8.2K 0.5% 1/10W
R210	1-216-611-11	s METAL, CHIP 22 0.5% 1/10W
R211	1-218-764-11	s METAL, CHIP 330K 0.50% 1/10W
R212	1-216-667-11	s METAL, CHIP 4.7K 0.5% 1/10W
R213	1-216-673-11	s METAL, CHIP 8.2K 0.5% 1/10W
R214	1-216-673-11	s METAL, CHIP 8.2K 0.5% 1/10W
R215	1-216-643-11	s METAL, CHIP 470 0.5% 1/10W
R216	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R217	1-216-699-11	s METAL, CHIP 100K 0.5% 1/10W
R218	1-216-655-11	s METAL, CHIP 1.5K 0.5% 1/10W
R219	1-216-644-11	s METAL, CHIP 510 0.5% 1/10W
R220	1-216-662-11	s METAL, CHIP 3K 0.5% 1/10W
R221	1-216-663-11	s METAL, CHIP 3.3K 0.5% 1/10W
R222	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R223	1-216-673-11	s METAL, CHIP 8.2K 0.5% 1/10W
R225	1-216-634-11	s METAL, CHIP 200 0.5% 1/10W
R226	1-216-631-11	s METAL, CHIP 150 0.5% 1/10W
R227	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R228	1-216-661-11	s METAL, CHIP 2.7K 0.5% 1/10W
R229	1-218-757-11	s METAL, CHIP 160K 0.50% 1/10W
R235	1-216-687-11	s METAL, CHIP 33K 0.5% 1/10W
R236	1-216-687-11	s METAL, CHIP 33K 0.5% 1/10W
R237	1-216-687-11	s METAL, CHIP 33K 0.5% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(VA-131A BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R239	1-216-687-11	s METAL. CHIP 33K 0.5% 1/10W
R240	1-216-687-11	s METAL. CHIP 33K 0.5% 1/10W
R241	1-216-687-11	s METAL. CHIP 33K 0.5% 1/10W
R300	1-216-627-11	s METAL. CHIP 100 0.5% 1/10W
R301	1-216-682-11	s METAL. CHIP 20K 0.5% 1/10W
R302	1-216-645-11	s METAL. CHIP 560 0.5% 1/10W
R303	1-216-603-11	s METAL. CHIP 10 0.5% 1/10W
R304	1-216-627-11	s METAL. CHIP 100 0.5% 1/10W
R305	1-216-641-11	s METAL. CHIP 390 0.5% 1/10W
R306	1-216-641-11	s METAL. CHIP 390 0.5% 1/10W
R307	1-216-651-11	s METAL. CHIP 1K 0.5% 1/10W
R308	1-216-656-11	s METAL. CHIP 1.6K 0.5% 1/10W
R310	1-216-680-11	s METAL. CHIP 16K 0.5% 1/10W
R311	1-216-645-11	s METAL. CHIP 560 0.5% 1/10W
R312	1-216-669-11	s METAL. CHIP 5.6K 0.5% 1/10W
R313	1-216-644-11	s METAL. CHIP 510 0.5% 1/10W
R314	1-216-657-11	s METAL. CHIP 1.8K 0.5% 1/10W
R315	1-216-660-11	s METAL. CHIP 2.4K 0.5% 1/10W
R316	1-216-675-11	s METAL. CHIP 10K 0.5% 1/10W
R317	1-216-675-11	s METAL. CHIP 10K 0.5% 1/10W
R318	1-216-669-11	s METAL. CHIP 5.6K 0.5% 1/10W
R320	1-216-673-11	s METAL. CHIP 8.2K 0.5% 1/10W
R321	1-216-675-11	s METAL. CHIP 10K 0.5% 1/10W
R322	1-216-611-11	s METAL. CHIP 22 0.5% 1/10W
R323	1-216-635-11	s METAL. CHIP 220 0.5% 1/10W
R324	1-216-675-11	s METAL. CHIP 10K 0.5% 1/10W
R325	1-216-653-11	s METAL. CHIP 1.2K 0.5% 1/10W
R326	1-216-661-11	s METAL. CHIP 2.7K 0.5% 1/10W
R327	1-216-661-11	s METAL. CHIP 2.7K 0.5% 1/10W
R328	1-216-659-11	s METAL. CHIP 2.2K 0.5% 1/10W
R329	1-216-635-11	s METAL. CHIP 220 0.5% 1/10W
R330	1-216-675-11	s METAL. CHIP 10K 0.5% 1/10W
R331	1-216-675-11	s METAL. CHIP 10K 0.5% 1/10W
R335	1-216-668-11	s METAL. CHIP 5.1K 0.5% 1/10W
R336	1-216-658-11	s METAL. CHIP 2K 0.5% 1/10W
R337	1-216-652-11	s METAL. CHIP 1.1K 0.5% 1/10W
R340	1-216-640-11	s METAL. CHIP 360 0.5% 1/10W
R341	1-216-646-11	s METAL. CHIP 620 0.5% 1/10W
R343	1-216-683-11	s METAL. CHIP 22K 0.5% 1/10W
R344	1-216-668-11	s METAL. CHIP 5.1K 0.5% 1/10W
R345	1-216-672-11	s METAL. CHIP 7.5K 0.5% 1/10W
R346	1-216-664-11	s METAL. CHIP 3.6K 0.5% 1/10W
R347	1-216-663-11	s METAL. CHIP 3.3K 0.5% 1/10W
R348	1-216-669-11	s METAL. CHIP 5.6K 0.5% 1/10W
R349	1-216-676-11	s METAL. CHIP 11K 0.5% 1/10W
R350	1-216-663-11	s METAL. CHIP 3.3K 0.5% 1/10W
R351	1-216-663-11	s METAL. CHIP 3.3K 0.5% 1/10W
R352	1-216-627-11	s METAL. CHIP 100 0.5% 1/10W
R353	1-218-768-11	s METAL. CHIP 470K 0.50% 1/10W
R355	1-216-687-11	s METAL. CHIP 33K 0.5% 1/10W
R356	1-216-651-11	s METAL. CHIP 1K 0.5% 1/10W
R358	1-216-661-11	s METAL. CHIP 2.7K 0.5% 1/10W
R359	1-216-679-11	s METAL. CHIP 15K 0.5% 1/10W
R361	1-216-683-11	s METAL. CHIP 22K 0.5% 1/10W
R362	1-216-645-11	s METAL. CHIP 560 0.5% 1/10W
R363	1-216-659-11	s METAL. CHIP 2.2K 0.5% 1/10W
R364	1-216-661-11	s METAL. CHIP 2.7K 0.5% 1/10W
R365	1-216-679-11	s METAL. CHIP 15K 0.5% 1/10W
R366	1-216-627-11	s METAL. CHIP 100 0.5% 1/10W

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Ref. No. or Q'ty	Part No.	SP Description
R367	1-216-627-11	s METAL. CHIP 100 0.5% 1/10W
R368	1-216-671-11	s METAL. CHIP 6.8K 0.5% 1/10W
R369	1-216-663-11	s METAL. CHIP 3.3K 0.5% 1/10W
R370	1-216-634-11	s METAL. CHIP 200 0.5% 1/10W
R371	1-218-766-11	s METAL. CHIP 390K 0.50% 1/10W
R372	1-216-634-11	s METAL. CHIP 200 0.5% 1/10W
R373	1-216-673-11	s METAL. CHIP 8.2K 0.5% 1/10W
R374	1-216-670-11	s METAL. CHIP 6.2K 0.5% 1/10W
R375	1-216-691-11	s METAL. CHIP 47K 0.5% 1/10W
R376	1-216-683-11	s METAL. CHIP 22K 0.5% 1/10W
R377	1-216-671-11	s METAL. CHIP 6.8K 0.5% 1/10W
R378	1-216-644-11	s METAL. CHIP 510 0.5% 1/10W
R379	1-216-669-11	s METAL. CHIP 5.6K 0.5% 1/10W
R380	1-216-671-11	s METAL. CHIP 6.8K 0.5% 1/10W
R382	1-216-670-11	s METAL. CHIP 6.2K 0.5% 1/10W
R383	1-216-643-11	s METAL. CHIP 470 0.5% 1/10W
R384	1-216-665-11	s METAL. CHIP 3.9K 0.5% 1/10W
R385	1-216-651-11	s METAL. CHIP 1K 0.5% 1/10W
R386	1-216-635-11	s METAL. CHIP 220 0.5% 1/10W
R387	1-216-687-11	s METAL. CHIP 33K 0.5% 1/10W
R389	1-216-635-11	s METAL. CHIP 220 0.5% 1/10W
R390	1-216-659-11	s METAL. CHIP 2.2K 0.5% 1/10W
R391	1-216-645-11	s METAL. CHIP 560 0.5% 1/10W
R392	1-216-631-11	s METAL. CHIP 150 0.5% 1/10W
R393	1-216-669-11	s METAL. CHIP 5.6K 0.5% 1/10W
R394	1-216-651-11	s METAL. CHIP 1K 0.5% 1/10W
R395	1-216-658-11	s METAL. CHIP 2K 0.5% 1/10W
R396	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R397	1-216-671-11	s METAL. CHIP 6.8K 0.5% 1/10W
R398	1-216-627-11	s METAL. CHIP 100 0.5% 1/10W
R399	1-216-663-11	s METAL. CHIP 3.3K 0.5% 1/10W
R400	1-216-664-11	s METAL. CHIP 3.6K 0.5% 1/10W
R401	1-216-634-11	s METAL. CHIP 200 0.5% 1/10W
R402	1-216-634-11	s METAL. CHIP 200 0.5% 1/10W
R403	1-218-768-11	s METAL. CHIP 470K 0.50% 1/10W
R404	1-216-659-11	s METAL. CHIP 2.2K 0.5% 1/10W
R405	1-216-675-11	s METAL. CHIP 10K 0.5% 1/10W
R406	1-216-675-11	s METAL. CHIP 10K 0.5% 1/10W
R407	1-216-675-11	s METAL. CHIP 10K 0.5% 1/10W
R408	1-216-651-11	s METAL. CHIP 1K 0.5% 1/10W
R409	1-216-611-11	s METAL. CHIP 22 0.5% 1/10W
R410	1-218-764-11	s METAL. CHIP 330K 0.50% 1/10W
R411	1-216-667-11	s METAL. CHIP 4.7K 0.5% 1/10W
R412	1-216-673-11	s METAL. CHIP 8.2K 0.5% 1/10W
R413	1-216-673-11	s METAL. CHIP 8.2K 0.5% 1/10W
R414	1-216-631-11	s METAL. CHIP 150 0.5% 1/10W
R415	1-216-627-11	s METAL. CHIP 100 0.5% 1/10W
R416	1-216-661-11	s METAL. CHIP 2.7K 0.5% 1/10W
R417	1-218-757-11	s METAL. CHIP 160K 0.50% 1/10W
R418	1-216-655-11	s METAL. CHIP 1.5K 0.5% 1/10W
R419	1-216-644-11	s METAL. CHIP 510 0.5% 1/10W
R420	1-216-662-11	s METAL. CHIP 3K 0.5% 1/10W
R421	1-216-663-11	s METAL. CHIP 3.3K 0.5% 1/10W
R422	1-216-675-11	s METAL. CHIP 10K 0.5% 1/10W
R425	1-216-634-11	s METAL. CHIP 200 0.5% 1/10W
R435	1-216-687-11	s METAL. CHIP 33K 0.5% 1/10W
R436	1-216-687-11	s METAL. CHIP 33K 0.5% 1/10W
R437	1-216-687-11	s METAL. CHIP 33K 0.5% 1/10W
R439	1-216-687-11	s METAL. CHIP 33K 0.5% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

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Ref. No. or Q'ty	Part No.	SP Description
R440	1-216-687-11	s METAL, CHIP 33K 0.5% 1/10W
R441	1-216-687-11	s METAL, CHIP 33K 0.5% 1/10W
R500	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R501	1-216-682-11	s METAL, CHIP 20K 0.5% 1/10W
R502	1-216-645-11	s METAL, CHIP 560 0.5% 1/10W
R503	1-216-603-11	s METAL, CHIP 10 0.5% 1/10W
R504	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R505	1-216-641-11	s METAL, CHIP 390 0.5% 1/10W
R506	1-216-641-11	s METAL, CHIP 390 0.5% 1/10W
R507	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R508	1-216-656-11	s METAL, CHIP 1.6K 0.5% 1/10W
R510	1-216-679-11	s METAL, CHIP 15K 0.5% 1/10W
R511	1-216-645-11	s METAL, CHIP 560 0.5% 1/10W
R512	1-216-669-11	s METAL, CHIP 5.6K 0.5% 1/10W
R513	1-216-644-11	s METAL, CHIP 510 0.5% 1/10W
R514	1-216-657-11	s METAL, CHIP 1.8K 0.5% 1/10W
R515	1-216-699-11	s METAL, CHIP 100K 0.5% 1/10W
R516	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R517	1-216-660-11	s METAL, CHIP 2.4K 0.5% 1/10W
R518	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R519	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R520	1-216-669-11	s METAL, CHIP 5.6K 0.5% 1/10W
R522	1-216-673-11	s METAL, CHIP 8.2K 0.5% 1/10W
R523	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R524	1-216-611-11	s METAL, CHIP 22 0.5% 1/10W
R527	1-216-635-11	s METAL, CHIP 220 0.5% 1/10W
R528	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R529	1-216-653-11	s METAL, CHIP 1.2K 0.5% 1/10W
R530	1-216-661-11	s METAL, CHIP 2.7K 0.5% 1/10W
R531	1-216-661-11	s METAL, CHIP 2.7K 0.5% 1/10W
R532	1-216-659-11	s METAL, CHIP 2.2K 0.5% 1/10W
R533	1-216-635-11	s METAL, CHIP 220 0.5% 1/10W
R534	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R535	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R539	1-216-668-11	s METAL, CHIP 5.1K 0.5% 1/10W
R540	1-216-658-11	s METAL, CHIP 2K 0.5% 1/10W
R541	1-216-652-11	s METAL, CHIP 1.1K 0.5% 1/10W
R544	1-216-640-11	s METAL, CHIP 360 0.5% 1/10W
R545	1-216-646-11	s METAL, CHIP 620 0.5% 1/10W
R547	1-216-683-11	s METAL, CHIP 22K 0.5% 1/10W
R548	1-216-668-11	s METAL, CHIP 5.1K 0.5% 1/10W
R549	1-216-672-11	s METAL, CHIP 7.5K 0.5% 1/10W
R550	1-216-664-11	s METAL, CHIP 3.6K 0.5% 1/10W
R551	1-216-663-11	s METAL, CHIP 3.3K 0.5% 1/10W
R552	1-216-669-11	s METAL, CHIP 5.6K 0.5% 1/10W
R553	1-216-676-11	s METAL, CHIP 11K 0.5% 1/10W
R554	1-216-663-11	s METAL, CHIP 3.3K 0.5% 1/10W
R555	1-216-663-11	s METAL, CHIP 3.3K 0.5% 1/10W
R556	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R557	1-218-768-11	s METAL, CHIP 470K 0.50% 1/10W
R559	1-216-687-11	s METAL, CHIP 33K 0.5% 1/10W
R560	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R562	1-216-661-11	s METAL, CHIP 2.7K 0.5% 1/10W
R563	1-216-679-11	s METAL, CHIP 15K 0.5% 1/10W
R565	1-216-683-11	s METAL, CHIP 22K 0.5% 1/10W
R566	1-216-645-11	s METAL, CHIP 560 0.5% 1/10W
R567	1-216-659-11	s METAL, CHIP 2.2K 0.5% 1/10W
R568	1-216-661-11	s METAL, CHIP 2.7K 0.5% 1/10W
R569	1-216-679-11	s METAL, CHIP 15K 0.5% 1/10W

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Ref. No. or Q'ty	Part No.	SP Description
R570	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R571	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R572	1-216-671-11	s METAL, CHIP 6.8K 0.5% 1/10W
R573	1-216-663-11	s METAL, CHIP 3.3K 0.5% 1/10W
R574	1-216-634-11	s METAL, CHIP 200 0.5% 1/10W
R575	1-218-766-11	s METAL, CHIP 390K 0.50% 1/10W
R576	1-216-634-11	s METAL, CHIP 200 0.5% 1/10W
R577	1-216-673-11	s METAL, CHIP 8.2K 0.5% 1/10W
R578	1-216-670-11	s METAL, CHIP 6.2K 0.5% 1/10W
R579	1-216-691-11	s METAL, CHIP 47K 0.5% 1/10W
R580	1-216-683-11	s METAL, CHIP 22K 0.5% 1/10W
R581	1-216-671-11	s METAL, CHIP 6.8K 0.5% 1/10W
R582	1-216-644-11	s METAL, CHIP 510 0.5% 1/10W
R583	1-216-669-11	s METAL, CHIP 5.6K 0.5% 1/10W
R584	1-216-671-11	s METAL, CHIP 6.8K 0.5% 1/10W
R586	1-216-670-11	s METAL, CHIP 6.2K 0.5% 1/10W
R587	1-216-643-11	s METAL, CHIP 470 0.5% 1/10W
R588	1-216-665-11	s METAL, CHIP 3.9K 0.5% 1/10W
R589	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R590	1-216-635-11	s METAL, CHIP 220 0.5% 1/10W
R591	1-216-687-11	s METAL, CHIP 33K 0.5% 1/10W
R593	1-216-635-11	s METAL, CHIP 220 0.5% 1/10W
R594	1-216-659-11	s METAL, CHIP 2.2K 0.5% 1/10W
R595	1-216-645-11	s METAL, CHIP 560 0.5% 1/10W
R596	1-216-631-11	s METAL, CHIP 150 0.5% 1/10W
R597	1-216-669-11	s METAL, CHIP 5.6K 0.5% 1/10W
R598	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R599	1-216-658-11	s METAL, CHIP 2K 0.5% 1/10W
R600	1-216-699-11	s METAL, CHIP 100K 0.5% 1/10W
R601	1-216-671-11	s METAL, CHIP 6.8K 0.5% 1/10W
R602	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R603	1-216-663-11	s METAL, CHIP 3.3K 0.5% 1/10W
R604	1-216-664-11	s METAL, CHIP 3.6K 0.5% 1/10W
R605	1-216-634-11	s METAL, CHIP 200 0.5% 1/10W
R606	1-216-634-11	s METAL, CHIP 200 0.5% 1/10W
R607	1-218-768-11	s METAL, CHIP 470K 0.50% 1/10W
R608	1-216-659-11	s METAL, CHIP 2.2K 0.5% 1/10W
R609	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R610	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R611	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R613	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R614	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R616	1-216-699-11	s METAL, CHIP 100K 0.5% 1/10W
R617	1-216-699-11	s METAL, CHIP 100K 0.5% 1/10W
R618	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R619	1-216-651-11	s METAL, CHIP 1K 0.5% 1/10W
R620	1-216-611-11	s METAL, CHIP 22 0.5% 1/10W
R621	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W
R622	1-216-649-11	s METAL, CHIP 820 0.5% 1/10W
R623	1-216-699-11	s METAL, CHIP 100K 0.5% 1/10W
R624	1-216-627-11	s METAL, CHIP 100 0.5% 1/10W
R625	1-218-764-11	s METAL, CHIP 330K 0.50% 1/10W
R626	1-216-667-11	s METAL, CHIP 4.7K 0.5% 1/10W
R627	1-216-673-11	s METAL, CHIP 8.2K 0.5% 1/10W
R628	1-216-655-11	s METAL, CHIP 1.5K 0.5% 1/10W
R629	1-216-644-11	s METAL, CHIP 510 0.5% 1/10W
R630	1-216-662-11	s METAL, CHIP 3K 0.5% 1/10W
R631	1-216-663-11	s METAL, CHIP 3.3K 0.5% 1/10W
R632	1-216-675-11	s METAL, CHIP 10K 0.5% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

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Ref. No. or Q'ty	Part No.	SP	Description
R634	1-216-634-11	s	METAL, CHIP 200 0.5% 1/10W
R635	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R636	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R637	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R639	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R640	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R641	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R642	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R643	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R644	1-216-661-11	s	METAL, CHIP 2.7K 0.5% 1/10W
R648	1-218-757-11	s	METAL, CHIP 160K 0.50% 1/10W
R701	1-216-685-11	s	METAL, CHIP 27K 0.5% 1/10W
R702	1-216-691-11	s	METAL, CHIP 47K 0.5% 1/10W
R703	1-216-662-11	s	METAL, CHIP 3K 0.5% 1/10W
R704	1-216-683-11	s	METAL, CHIP 22K 0.5% 1/10W
R705	1-216-683-11	s	METAL, CHIP 22K 0.5% 1/10W
R706	1-216-655-11	s	METAL, CHIP 1.5K 0.5% 1/10W
R707	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R708	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R709	1-216-677-11	s	METAL, CHIP 12K 0.5% 1/10W
R710	1-216-679-11	s	METAL, CHIP 15K 0.5% 1/10W
R711	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R712	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R713	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R714	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R715	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R716	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R717	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R718	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R719	1-216-691-11	s	METAL, CHIP 47K 0.5% 1/10W
R720	1-216-683-11	s	METAL, CHIP 22K 0.5% 1/10W
R721	1-216-683-11	s	METAL, CHIP 22K 0.5% 1/10W
R722	1-216-669-11	s	METAL, CHIP 5.6K 0.5% 1/10W
R723	1-216-691-11	s	METAL, CHIP 47K 0.5% 1/10W
R724	1-216-679-11	s	METAL, CHIP 15K 0.5% 1/10W
R725	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R726	1-216-681-11	s	METAL, CHIP 18K 0.5% 1/10W
R727	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R728	1-216-669-11	s	METAL, CHIP 5.6K 0.5% 1/10W
R729	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R730	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R731	1-216-693-11	s	METAL, CHIP 56K 0.5% 1/10W
R732	1-216-683-11	s	METAL, CHIP 22K 0.5% 1/10W
R733	1-216-671-11	s	METAL, CHIP 6.8K 0.5% 1/10W
R734	1-216-661-11	s	METAL, CHIP 2.7K 0.5% 1/10W
R735	1-216-665-11	s	METAL, CHIP 3.9K 0.5% 1/10W
R736	1-216-669-11	s	METAL, CHIP 5.6K 0.5% 1/10W
R737	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R738	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R739	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R740	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R741	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R742	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R743	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R744	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R745	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R746	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R747	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R748	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R749	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R750	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R751	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R752	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R753	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R754	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R755	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R756	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R757	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R758	1-218-756-11	s	METAL, CHIP 150K 0.50% 1/10W
R759	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R760	1-218-768-11	s	METAL, CHIP 470K 0.50% 1/10W
R761	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R762	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R763	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R764	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R765	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R766	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R767	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R768	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R769	1-218-757-11	s	METAL, CHIP 160K 0.50% 1/10W
R770	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R771	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R772	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R773	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R774	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R775	1-218-757-11	s	METAL, CHIP 160K 0.50% 1/10W
R776	1-218-759-11	s	METAL, CHIP 200K 0.50% 1/10W
R777	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R778	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R779	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R780	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R781	1-216-691-11	s	METAL, CHIP 47K 0.5% 1/10W
R782	1-218-759-11	s	METAL, CHIP 200K 0.50% 1/10W
R783	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R784	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R785	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R786	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R787	1-218-768-11	s	METAL, CHIP 470K 0.50% 1/10W
R788	1-218-759-11	s	METAL, CHIP 200K 0.50% 1/10W
R789	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R790	1-218-768-11	s	METAL, CHIP 470K 0.50% 1/10W
R791	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R792	1-218-768-11	s	METAL, CHIP 470K 0.50% 1/10W
R793	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R794	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R795	1-218-760-11	s	METAL, CHIP 220K 0.50% 1/10W
R796	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R797	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R798	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R799	1-218-776-11	s	METAL, CHIP 1M 0.50% 1/10W
R800	1-218-776-11	s	METAL, CHIP 1M 0.50% 1/10W
R801	1-218-776-11	s	METAL, CHIP 1M 0.50% 1/10W
R802	1-218-764-11	s	METAL, CHIP 330K 0.50% 1/10W
R803	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R804	1-216-678-11	s	METAL, CHIP 13K 0.5% 1/10W
R805	1-218-766-11	s	METAL, CHIP 390K 0.50% 1/10W
R806	1-216-696-11	s	METAL, CHIP 75K 0.5% 1/10W
R807	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(VA-131A BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R808	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R809	1-216-675-11	s METAL. CHIP 10K 0.5% 1/10W
R810	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R811	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R812	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R814	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R815	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R816	1-218-764-11	s METAL. CHIP 330K 0.50% 1/10W
R817	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R818	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R819	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R820	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R821	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R822	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R823	1-218-764-11	s METAL. CHIP 330K 0.50% 1/10W
R824	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R825	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R826	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R827	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R828	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R829	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R830	1-218-764-11	s METAL. CHIP 330K 0.50% 1/10W
R831	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R832	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R833	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R834	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R835	1-216-699-11	s METAL. CHIP 100K 0.5% 1/10W
R836	1-218-760-11	s METAL. CHIP 220K 0.50% 1/10W
R837	1-218-760-11	s METAL. CHIP 220K 0.50% 1/10W
R838	1-218-760-11	s METAL. CHIP 220K 0.50% 1/10W
R839	1-218-760-11	s METAL. CHIP 220K 0.50% 1/10W
R840	1-218-755-11	s METAL. CHIP 130K 0.50% 1/10W
R841	1-218-760-11	s METAL. CHIP 220K 0.50% 1/10W
R842	1-218-760-11	s METAL. CHIP 220K 0.50% 1/10W
R843	1-218-760-11	s METAL. CHIP 220K 0.50% 1/10W
R844	1-218-760-11	s METAL. CHIP 220K 0.50% 1/10W
R845	1-218-755-11	s METAL. CHIP 130K 0.50% 1/10W
R846	1-218-760-11	s METAL. CHIP 220K 0.50% 1/10W
R847	1-218-760-11	s METAL. CHIP 220K 0.50% 1/10W
R848	1-218-760-11	s METAL. CHIP 220K 0.50% 1/10W
R849	1-218-760-11	s METAL. CHIP 220K 0.50% 1/10W
R850	1-218-755-11	s METAL. CHIP 130K 0.50% 1/10W
RV100	1-228-472-00	s RES. ADJ. METAL 2K
RV101	1-228-457-00	s RES. ADJ. METAL 2K
RV102	1-228-462-00	s RES. ADJ. METAL 100K
RV103	1-228-462-00	s RES. ADJ. METAL 100K
RV104	1-228-461-00	s RES. ADJ. METAL 50K
RV105	1-228-476-00	s RES. ADJ. METAL 50K
RV106	1-228-462-00	s RES. ADJ. METAL 100K
RV300	1-228-472-00	s RES. ADJ. METAL 2K
RV302	1-228-462-00	s RES. ADJ. METAL 100K
RV303	1-228-462-00	s RES. ADJ. METAL 100K
RV304	1-228-461-00	s RES. ADJ. METAL 50K
RV305	1-228-476-00	s RES. ADJ. METAL 50K
RV306	1-228-462-00	s RES. ADJ. METAL 100K
RV500	1-228-472-00	s RES. ADJ. METAL 2K
RV501	1-228-457-00	s RES. ADJ. METAL 2K
RV502	1-228-462-00	s RES. ADJ. METAL 100K

(VA-131A BOARD)

Ref. No. or Q'ty	Part No.	SP Description
RV503	1-228-462-00	s RES. ADJ. METAL 100K
RV504	1-228-461-00	s RES. ADJ. METAL 50K
RV505	1-228-476-00	s RES. ADJ. METAL 50K
RV506	1-228-462-00	s RES. ADJ. METAL 100K
RV701	1-228-456-00	s RES. ADJ. METAL 1K
RV702	1-228-459-00	s RES. ADJ. METAL 10K
RV703	1-228-459-00	s RES. ADJ. METAL 10K
RV704	1-228-471-00	s RES. ADJ. METAL 1K
RV705	1-228-477-00	s RES. ADJ. METAL 100K
RV706	1-228-477-00	s RES. ADJ. METAL 100K
RV707	1-228-477-00	s RES. ADJ. METAL 100K
RV708	1-228-463-00	s RES. ADJ. METAL 200K
RV709	1-228-463-00	s RES. ADJ. METAL 200K
RV710	1-228-463-00	s RES. ADJ. METAL 200K
RV711	1-228-459-00	s RES. ADJ. METAL 10K
RV712	1-228-459-00	s RES. ADJ. METAL 10K
RV713	1-228-462-00	s RES. ADJ. METAL 100K
RV714	1-228-459-00	s RES. ADJ. METAL 10K
RV715	1-228-459-00	s RES. ADJ. METAL 10K
RV716	1-228-459-00	s RES. ADJ. METAL 10K
RV717	1-228-462-00	s RES. ADJ. METAL 100K
RV718	1-228-459-00	s RES. ADJ. METAL 10K
RV719	1-228-459-00	s RES. ADJ. METAL 10K
RV720	1-228-459-00	s RES. ADJ. METAL 10K
RV721	1-228-462-00	s RES. ADJ. METAL 100K
RV722	1-228-459-00	s RES. ADJ. METAL 10K
RV723	1-228-460-00	s RES. ADJ. METAL 20K
RV724	1-228-460-00	s RES. ADJ. METAL 20K
RV725	1-228-462-00	s RES. ADJ. METAL 100K
RV726	1-228-460-00	s RES. ADJ. METAL 20K
RV727	1-228-460-00	s RES. ADJ. METAL 20K
RV728	1-228-460-00	s RES. ADJ. METAL 20K
RV729	1-228-462-00	s RES. ADJ. METAL 100K
RV730	1-228-460-00	s RES. ADJ. METAL 20K
RV731	1-228-460-00	s RES. ADJ. METAL 20K
RV732	1-228-460-00	s RES. ADJ. METAL 20K
RV733	1-228-462-00	s RES. ADJ. METAL 100K
RV734	1-228-460-00	s RES. ADJ. METAL 20K
S701	1-570-857-11	s SWITCH. SLIDE

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

FILTER UNIT BLOCK

Ref. No. or Q'ty	Part No.	SP Description
	1-547-405-11	o UNIT, FILTER
	1-547-406-11	o DRIVER, SURVO
C1	1-164-232-11	s CERAMIC CHIP 0.01 10% 50V
C2	1-164-232-11	s CERAMIC CHIP 0.01 10% 50V
C3	1-164-232-11	s CERAMIC CHIP 0.01 10% 50V
C4	1-164-232-11	s CERAMIC CHIP 0.01 10% 50V
C5	1-164-232-11	s CERAMIC CHIP 0.01 10% 50V
C6	1-164-232-11	s CERAMIC CHIP 0.01 10% 50V
C7	1-164-232-11	s CERAMIC CHIP 0.01 10% 50V
C8	1-164-232-11	s CERAMIC CHIP 0.01 10% 50V
C9	1-164-232-11	s CERAMIC CHIP 0.01 10% 50V
C10	1-124-240-11	s ELECT 10 20% 25V
C11	1-164-232-11	s CERAMIC CHIP 0.01 10% 50V
C12	1-164-232-11	s CERAMIC CHIP 0.01 10% 50V
CN1	1-506-487-11	o CONNECTOR, 8P, MALE
CN2	1-506-489-11	o CONNECTOR, 10P, MALE
D1	8-719-105-63	s DIODE RD4.3M-B1
D2	8-719-105-63	s DIODE RD4.3M-B1
D3	8-719-105-63	s DIODE RD4.3M-B1
D4	8-719-105-63	s DIODE RD4.3M-B1
IC1	8-759-009-06	s IC MC14052BF
IC2	8-759-928-08	s IC TLC27M4CNS
IC3	8-759-009-06	s IC MC14052BF
IC4	8-759-928-08	s IC TLC27M4CNS
IC5	8-759-928-08	s IC TLC27M4CNS
IC6	8-759-982-21	s IC RC78L05A
L1	1-408-421-00	s INDUCTOR 100UH
L2	1-408-421-00	s INDUCTOR 100UH
L3	1-408-421-00	s INDUCTOR 100UH
L4	1-408-421-00	s INDUCTOR 100UH
L5	1-408-421-00	s INDUCTOR 100UH
Q1	8-729-159-64	s TRANSISTOR 2SD596
Q2	8-729-162-43	s TRANSISTOR 2SB624-BV3
Q3	8-729-159-64	s TRANSISTOR 2SD596
Q4	8-729-162-43	s TRANSISTOR 2SB624-BV3
Q5	8-729-159-64	s TRANSISTOR 2SD596
Q6	8-729-162-43	s TRANSISTOR 2SB624-BV3
Q7	8-729-159-64	s TRANSISTOR 2SD596
Q8	8-729-162-43	s TRANSISTOR 2SB624-BV3
R5	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R6	1-216-656-11	s METAL CHIP 1.6K 0.5% 1/10W
R7	1-216-656-11	s METAL CHIP 1.6K 0.5% 1/10W
R8	1-216-656-11	s METAL CHIP 1.6K 0.5% 1/10W
R9	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R10	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R11	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R12	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R13	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R14	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R15	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R16	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R17	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R18	1-216-107-00	s METAL 270K 5% 1/10W
R19	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R20	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R21	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R22	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W

(FILTER UNIT BLOCK)

Ref. No. or Q'ty	Part No.	SP Description
R23	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R24	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R25	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R26	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R27	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R32	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R33	1-216-656-11	s METAL CHIP 1.6K 0.5% 1/10W
R34	1-216-656-11	s METAL CHIP 1.6K 0.5% 1/10W
R35	1-216-656-11	s METAL CHIP 1.6K 0.5% 1/10W
R36	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R37	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R38	1-216-699-11	s METAL CHIP 100K 0.50% 1/10W
R39	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R40	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R41	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R42	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R43	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R44	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R45	1-216-107-00	s METAL 270K 5% 1/10W
R46	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R47	1-216-673-11	s METAL CHIP 8.2K 0.50% 1/10W
R48	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R49	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R50	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R51	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R52	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R53	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R54	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R55	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R56	1-216-675-11	s METAL CHIP 10K 0.50% 1/10W
R57	1-216-627-11	s METAL CHIP 100 0.50% 1/10W
R58	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
R59	1-216-651-11	s METAL CHIP 1K 0.50% 1/10W
RV1	1-228-456-00	s RES. ADJ. METAL 1K
RV2	1-228-456-00	s RES. ADJ. METAL 1K
RV3	1-228-456-00	s RES. ADJ. METAL 1K
RV4	1-228-456-00	s RES. ADJ. METAL 1K
RV5	1-228-456-00	s RES. ADJ. METAL 1K
RV6	1-228-456-00	s RES. ADJ. METAL 1K
RV7	1-228-456-00	s RES. ADJ. METAL 1K
RV8	1-228-456-00	s RES. ADJ. METAL 1K

S1 1-571-098-11 s SWITCH, SLIDE

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

FRAME

Ref. No. or Q'ty	Part No.	SP Description
	1-532-284-00	s FUSE, TIME-LAG 630mA 250V
	1-532-325-00	s FUSE, TIME-LAG 6.3A 125V
	1-532-598-00	s FUSE, GLASS TUBE 4A 125V
	1-547-391-11	o FILTER UNIT, LOW PASS (3)
	1-547-403-11	o GLASS UNIT, DUMMY
	*) (FOR CCD UNIT W/BLOCK No. SxxxxxP)	
	1-562-148-11	o HOUSING, 3P (FOR TEMP)
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
	1-562-153-11	o HOUSING, 8P (FOR PRISM BLOCK)
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
	8-759-947-34	s IC LM35DZ (BIAS)
C101	1-636-289-11	o PRINTED CIRCUIT BOARD, CN-522
C102	1-102-363-00	s CAP, CERAMIC 1000PF
	1-102-363-00	s CAP, CERAMIC 1000PF
CN1F (to	CN-261 board)	
	1-562-666-11	o HOUSING, 5P
	1-560-764-21	o CONTACT, FEMALE, AWG18-24
CN1F (to	CN-390 board)	
	1-563-126-11	o HOUSING, 24P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN1F (to	CN-391 board)	
	1-563-122-11	o HOUSING, 16P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN1F (to	CN-451 board L/R)	
	1-562-147-11	o HOUSING, 2P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN1F (to	LF-15 board)	
	1-561-876-00	o HOUSING, 3P
	1-560-764-21	o CONTACT, FEMALE, AWG18-24
CN1F (to	PA-102 BOARD)	
	1-562-155-11	o HOUSING, 10P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN1F (to	PS-192 board)	
	1-562-287-11	o HOUSING, 6P
	1-562-210-11	o CONTACT, FEMALE, AWG22-18
CN1F (to	PS-198 board)	
	1-562-640-11	o HOUSING, 8P
	1-562-210-11	o CONTACT, FEMALE, AWG22-18
CN1F (to	SW-386 board)	
	1-562-150-11	o HOUSING, 5P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN1F (to	SW-387 board)	
	1-562-148-11	o HOUSING, 3P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN1F (to	SW-388 board)	
	1-563-127-11	o HOUSING, 26P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN1F (to	SW-389 board)	
	1-563-129-11	o HOUSING, 30P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28

(FRAME)

Ref. No. or Q'ty	Part No.	SP Description
CN1F (to	SW-417 board)	
	1-562-149-11	o HOUSING, 4P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN1F (to	TG-62P board)	
	1-562-151-11	o HOUSING, 6P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN2F (to	CN-390 board)	
	1-562-148-11	o HOUSING, 3P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN2F (to	LF-15 board)	
	1-562-147-11	o HOUSING, 2P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN2F (to	PS-198 board)	
	1-562-883-11	o HOUSING, 7P
	1-562-210-11	o CONTACT, FEMALE, AWG22-18
CN2F (to	SW-388 board)	
	1-562-153-11	o HOUSING, 8P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN2F (to	SW-389 board)	
	1-562-152-11	o HOUSING, 7P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN2F (to	TG-62P board)	
	1-562-155-11	o HOUSING, 10P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN3F (to	CN-390 board)	
	1-562-148-11	o HOUSING, 3P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN3F (to	DR-103 board)	
	1-562-155-11	o HOUSING, 10P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN3F (to	FL-86 board)	
	1-575-400-11	o CABLE ASSY, RF
CN3F (to	LF-15 board)	
	1-561-876-00	o HOUSING, 3P
	1-560-764-21	o CONTACT, FEMALE, AWG18-24
CN3F (to	PS-198 board)	
	1-562-286-11	o HOUSING, 5P
	1-562-210-11	o CONTACT, FEMALE, AWG22-18
CN3F (to	SW-388 board)	
	1-562-149-11	o HOUSING, 4P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN3F (to	SW-389 board)	
	1-562-152-11	o HOUSING, 7P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN4F (to	PS-198 board)	
	1-562-287-11	o HOUSING, 6P
	1-562-210-11	o CONTACT, FEMALE, AWG22-18
CN4F (to	SW-388 board)	
	1-562-147-11	o HOUSING, 2P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

(FRAME)

Ref. No. or Q'ty	Part No.	SP Description
CN4F (to SW-389 board)	1-562-147-11	o HOUSING, 5P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN5F (to CN-261 board)	1-562-666-11	o HOUSING, 5P
	1-560-764-11	o CONTACT, FEMALE, AWG18-24
CN5F (to PS-198 board)	1-563-120-11	o HOUSING, 12P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN6F (to CN-390 board)	1-562-147-11	o HOUSING, 2P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN6F (to PS-198 board)	1-563-117-11	o HOUSING, 6P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN7F (to CN-390 board)	1-562-147-11	o HOUSING, 2P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN7F (to PS-198 board)	1-563-118-11	o HOUSING, 8P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN8F (to PS-198 board)	1-563-125-11	o HOUSING, 22P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN10F (to MB-270 board)	1-563-128-11	o HOUSING, 28P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN11F (to MB-270 board)	1-563-126-11	o HOUSING, 24P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN12F (to MB-270 board)	1-563-118-11	o HOUSING, 8P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN13F (to MB-270 board)	1-563-116-11	o HOUSING, 4P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30
CN14F (to MB-270 board)	1-563-118-11	o HOUSING, 8P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN15F (to MB-270 board)	1-563-129-11	o HOUSING, 30P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN16F (to MB-270 board)	1-563-122-11	o HOUSING, 16P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN17F (to MB-270 board)	1-563-118-11	o HOUSING, 8P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN19F (to MB-270 board)	1-563-116-11	o HOUSING, 4P
	1-563-088-11	o CONTACT, FEMALE, AWG24-30

(FRAME)

Ref. No. or Q'ty	Part No.	SP Description
CN20F (to MB-270 board)	1-563-118-11	o HOUSING, 8P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN21F (to MB-270 board)	1-563-123-11	o HOUSING, 18P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN22F (to MB-270 board)	1-563-125-11	o HOUSING, 22P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN23F (to MB-270 board)	1-563-118-11	o HOUSING, 8P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN24F (to MB-270 board)	1-563-126-11	o HOUSING, 24P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN25F (to MB-270 board)	1-563-119-11	o HOUSING, 10P
	1-563-115-11	o CONTACT, FEMALE, AWG24-28
CN101	1-562-889-11	s CONNECTOR, AC 3P "AC OUT"
CN102	1-569-253-21	s CONNECTOR, BNC "MONITOR OUT"
CN103	1-569-253-21	s CONNECTOR, BNC "PROMPT OUT"
CN104	1-509-184-31	s CONNECTOR, 3P FEMALE, "MIC IN CH-1"
CN105	1-509-184-31	s CONNECTOR, 3P FEMALE, "MIC IN CH-1"
CN106	1-561-376-00	s CONNECTOR (S) 4P, FEMALE "SCRIPT"
CN201	1-561-844-00	s CONNECTOR, COAXIAL, FEMALE TRIAX "CCU"
CN202	1-565-656-11	o CONNECTOR, COAXIAL (2.5C)
CN301	1-945-163-11	o HARNESS (VF)
	1-562-989-11	s CONNECTOR, MULTI 25P, FEMALE
	1-562-580-11	s CONTACT, FEMALE, AWG24-28
CN302	1-509-892-31	o CONNECTOR, 36P, FEMALE "LENS"
D101	8-719-907-03	s DIODE BD703G "POWER"
J101	1-507-676-00	s JACK PHONE "INCOM1"
J102	1-507-676-00	s JACK PHONE "PCM1"
J103	1-507-676-00	s JACK PHONE "INCOM2"
J104	1-507-676-00	s JACK PHONE "PCM2"
S101	1-570-117-41	s SWITCH, ROCKER (AC POWER)
S102	1-570-173-11	s SWITCH, VOLTAGE SELECTOR "CCU/EXT"
S103	1-570-296-21	s SWITCH, TOGGLE "INCOM2"
S107	1-570-296-21	s SWITCH, TOGGLE "SCRIPT"
S108	1-570-171-12	s SWITCH, PUSH (1 KEY) "CURSOR"
S109	1-572-204-11	s SWITCH, PUSH (3KEY) "R,G,B"
S110	1-570-170-12	s SWITCH, PUSH (2 KEY) "RET1, 2"
S111	1-570-142-11	s SWITCH, PUSH "FILTER LOCAL"
T101	1-448-209-12	s TRANSFORMER, POWER

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.

PACKING MATERIALS & SUPPLIED ACCESSORIES

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-7515-082-A	o MOUNTED CIRCUIT BOARD, EX-228
1pc	A-7612-281-A	o PLATE ASSY. NUMBER
1pc	1-506-522-11	s CONNECTOR, ROUND 10P. MALE
2pcs	1-518-411-00	s LAMP
1pc	Δ1-532-284-00	s FUSE, TIME-LAG 630mA 250V
1pc	Δ1-532-325-00	s FUSE, TIME-LAG 6.3A 125V
3pcs	Δ1-532-598-00	s FUSE, GLASS TUBE 4A 125V
1pc	1-560-078-00	s CONNECTOR, 6P, MALE
1pc	1-560-155-00	s CONNECTOR, 4P, MALE
2pcs	2-280-511-01	o BRACKET, ADJUSTMENT, ANGLE

Please see pages D-25 to D-28 for the part numbers of capacitors and resistors that are not listed in the parts list.